

Florida Department of Environmental Protection

Memorandum

TO: Trina Vielhauer
THROUGH: Al Linero *aal*
FROM: David Read *dr*
DATE: March 4, 2008
SUBJECT: Draft Air Permit No. 0970014-012-AC
Intercession City Plant
Data Exclusion Conditions

Attached for your review are the following items:

- Intent to Issue Permit and Public Notice Package;
- Technical Evaluation and Preliminary Determination;
- Draft Permit; and
- PE Certification

This draft permit further defines the methodology for the exclusion of excess emissions data recorded during startups, shutdowns, and malfunctions from the calculation of 24-hour nitrogen oxides (NO_x) averages applicable to combustion turbines (CT) P12, P13, and P14 at the Intercession City Plant. The facility is located in Osceola County approximately 3.5 miles west of Intercession City. The address is 6525 Osceola-Polk Line Road, Intercession City, Florida 33848. The Technical Evaluation and Preliminary Determination provide a description of the project, rule applicability, and emissions standards. Day 90 is March 5, 2008. I recommend your approval of the attached Draft Permit package for this project.

AAL/dlr

Attachments

WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

*In the Matter of an
Application for Air Permit by:*

Progress Energy Florida, Inc.
6525 Osceola-Polk Line Road
Intercession City, Florida 33848

Air Permit No. 0970014-012-AC
Facility ID No. 0970014
Intercession City Plant
Data Exclusion Conditions
Osceola County, Florida

Authorized Representative:
Ms. Julie Turner, Plant Manager

Facility Location: The facility is located in Osceola County approximately 3.5 miles west of Intercession City. The address is 6525 Osceola-Polk Line Road, Intercession City, Florida 33848..

Project: The existing facility is an electric power generating plant consisting of fourteen combustion turbine (CT) peaking units (P1-P14). Units P12, P13, and P14 each consist of a General Electric Model 7EA gas turbine with a nominal generating capacity of 91 MW when firing natural gas or distillate oil. The permittee has submitted a permit application to further define the methodology for the exclusion of excess emissions data recorded during startups, shutdowns, and malfunctions from the calculation of 24-hour nitrogen oxides (NO_x) averages applicable to Units P12, P13, and P14 at the Intercession City Plant. Instead of increasing the period of allowable excludable emissions data from four to six hours per day as requested by the permittee, the permitting authority will allow exclusions of up to 240 minutes of data related to startup, shutdown, and malfunction per day.

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210, and 62-212 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to data exclusion changes. The Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, Mail Station (MS) #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

Project File: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at the address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may view the Draft Permit by visiting the following website: <http://www.dep.state.fl.us/air/eproducts/ards> and entering the permit number indicated above. A copy of the complete project file is also available at the Air Resources Section of the Department's Central District Office at 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767. The telephone number is 407/894-7555.

Notice of Intent to Issue Permit: The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comments received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Public Notice: Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1., F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Construction Permit. The notice shall be published one time only in the legal advertisement section of a newspaper of general circulation in the area affected. Rule 62-110.106(7)(b), F.A.C., requires that the applicant cause the

WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

notice to be published as soon as possible after notification by the Department of its intended action. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400 (Telephone: 850/488-0114; Fax 850/ 921-9533). You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in section 50.051, F.S. to the office of the Department issuing the permit. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rules 62-110.106(9) & (11), F.A.C.

The Department will issue the final construction permit unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

Comments: The Department will accept written comments concerning the proposed permit issuance action for a period of 14 days from the date of publication of the Public Notice. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the draft permit and require, if applicable, another Public Notice.

Petitions: The Department will issue the construction permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, MS #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within 14 days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within 14 days of publication of the public notice or within 14 days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specified rules or statutes; and (g) A statement



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

March 4, 2008

Electronic Mail – Received Receipt Requested.

Julie.Turner@gmail.com

Ms. Julie Turner, Plant Manager
Intercession City Plant
Progress Energy Florida, Inc.
6525 Osceola-Polk Line Road
Intercession City, Florida 33848

Re: Air Construction Permit No. 09700143-012-AC
Progress Energy Florida - Intercession City Power Plant
Data Exclusion Conditions – Combustion Turbines No. P12, P13 and P14

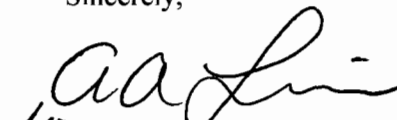
Dear Ms. Turner:

On December 7, 2007, the Department received your request for an air construction permit to modify the methodology for the exclusion of excess emissions data recorded during startups, shutdowns, and malfunctions from the calculation of 24-hour nitrogen oxides (NO_x) averages applicable to combustion turbines (CT) P12, P13, and P14 at the Intercession City Plant.

The enclosed "Technical Evaluation and Preliminary Determination" summarizes the Permitting Authority's technical review of the application and provides the rationale for making the preliminary determination to issue a Draft Permit. The proposed "Draft Permit" includes the specific conditions that regulate the emissions units covered by the proposed project. The "Written Notice of Intent to Issue Air Permit" provides important information regarding: the Permitting Authority's intent to issue an air permit for the proposed project; the requirements for publishing a Public Notice of the Permitting Authority's intent to issue an air permit; the procedures for submitting comments on the Draft Permit; the process for filing a petition for an administrative hearing; and the availability of mediation. The "Public Notice of Intent to Issue Air Permit" is the actual notice that you must have published in the legal advertisement section of a newspaper of general circulation in the area.

If you have any questions, please contact the Project Engineer, David Read at 850/414-7268.

Sincerely,


Prina Vielhauer, Chief
Bureau of Air Regulation

TLV/aal/dlr

Enclosures

WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available in this proceeding.

Executed in Tallahassee, Florida.



Trina Vielhauer, Chief
Bureau of Air Regulation

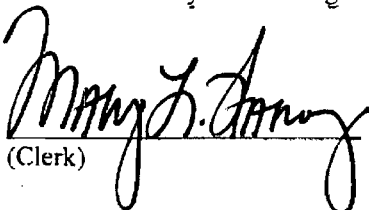
CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Intent to Issue Air Construction Permit (including the Public Notice, Technical Evaluation, and the Draft permit) and all copies were sent electronically (with Received Receipt) before the close of business on **March 4, 2008** to the persons listed:

Julie Turner, PEF: Julie.Turner@pgnmail
Scott Osbourn, P.E: sosbourn@golder.com
Dave Meyer, PEF: Dave.Meyer@pgnmail.com
Jim Little, EPA Region 4: little.james@epamail.epa.gov
Kathy Forney, EPA Region 4: forney.kathleen@epamail.epa.gov
James Bradner, DEP: james.bradner@dep.state.fl.us

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.


(Clerk) _____ 3/4/08
(Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT

Petitions: The Department will issue the construction permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, MS #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within 14 days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within 14 days of publication of the public notice or within 14 days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specified rules or statutes; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Public Notice of Intent to Issue Air Permit. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available for this proceeding.

**TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION**

PROJECT

Project No. 0970014-012-AC
Draft Air Permit No. PSD-FL-268B

Changes to the Excludable Data Provisions for Startups, Shutdowns and Malfunctions
(Emissions Unit No. 018, 019, and 020)
(Also designated as Combustion Turbines P12, P13 and P14)

COUNTY

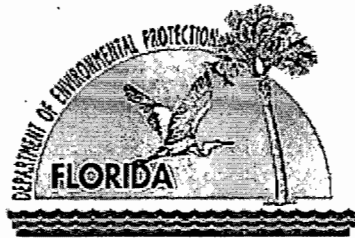
Osceola County

APPLICANT

Florida Power
Intercession City Plant
ARMS Facility ID No. 0970014

**PERMITTING
AUTHORITY**

Florida Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation



March 4, 2008

{Filename: 268B TEPD.doc}

Applicant Name and Address

Ms. Julie Turner, Plant Manager
 Intercession City Plant
 6525 Osceola-Polk Line Road
 Intercession City, Florida 33848

Processing Schedule

12/06/07 Received complete application for a minor modification.
 03/04/08 Distributed Intent to Issue Air Permit.

Facility Description and Location

The applicant operates an electric power plant (SIC No. 4922) located at Osceola County approximately 3.5 miles west of Intercession City. The address is 6525 Osceola Polk County Line Road, Intercession City, Florida 33848. The UTM coordinates are Zone 17, 446.3 km E, 3126.0 km N and the map coordinates are Latitude 28° 15' 38", Longitude 81° 32' 51".

Project Description

The applicant, Progress Energy, Florida, Inc. operates an 1170 MW electric power plant in Intercession City. In 2000/2001, three new 91 MW simple cycle gas turbines (Units P12-P14) were added to the facility under air construction Permit No. PSD-FL-268 (later modified as PSD-FL-268B). Because of the frequent but intermittent use of the peaking units, they undergo numerous startups and shutdowns. Often they may be started and shut down more than once in the same day.

During a portion of the startup and shutdown phases, the concentration of nitrogen oxides (NO_x) emitted in the exhaust from the three units can exceed the permitted limit of 10 parts per million by volume, dry, corrected to 15 percent oxygen (ppmvd @15%O₂). Compliance is based on valid hours recorded in a 24-hour day. The present permits allow up to 4 hours of NO_x data exclusion per day to account for excess emissions during startups, shutdowns and malfunctions.

According to the company, they occasionally exclude the four hours in a given day during two startups and shutdowns for any of the turbines. This theoretically exposes their operation to the possibility of having a malfunction and resulting excess emissions that cannot be excluded from the 24-hour emissions calculation. To remedy this possibility, the applicant requested the following changes in the permit conditions applicable to Units P12, P13 and P14. The requested changes are shown in ~~strikeout~~ and underline format.

Alternate Standards and NO_x CEMS Data Exclusion: The following permit conditions establish alternate standards or allow the exclusion of monitoring data for specifically defined periods of startup, shutdown, and documented malfunction of a gas turbine. These conditions apply only if operators employ the best operational practices to minimize the amount and duration of emissions during such episodes.

~~(1) *Startup, Shutdown, and Malfunction:* No more than 1 hourly emission rate value shall be excluded per cycle. No more than 1 hourly emission rate value due to shutdown shall be excluded per cycle. No more than 2 hourly emission rate values shall be excluded in a 24-hour period due to malfunction. No more than 4 hourly emission rate values shall be excluded in a 24-hour period due to all startups, shutdowns, and malfunctions. Note: A fuel switch is not considered "startup".~~

(1) Excess emissions resulting from startup, shutdown and malfunction of any emissions unit shall be permitted providing: (1) best operational practices to minimize emissions are adhered to, and (2) the duration of excess emissions shall be minimized but in no case exceed two hours due to startup or shutdown in any 24-hour period for each startup and shutdown cycle. No more than 2 hourly emission rate values shall be excluded in a 24-hour period due to malfunction. The duration of excess emissions shall be minimized but in no case exceed these durations unless specifically authorized by the Department. Excess emissions which are cause entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited.

Supporting data from Applicant

An example of the kind of daily operation scenario that can expose the applicant to the situation previously described (a malfunction after already excluding 4 hourly emission rate values) is given in the following table.

P12

Reports

Report Date: 02/13/2006

Created: 10/23/2007 09:15

HOUR	EMISSIONS FROM GAS FUEL ppmvd @ 15% O2	EMISSIONS FROM OIL FUEL ppmvd @ 15% O2	EXCEEDS VALUE	EX	EXCLUSION JUSTIFICATION
00	Off-Line				
01	Off-Line				
02	Off-Line				
03	Off-Line				
04	Off-Line				
05	46.291		Y	Y	Startup
06	8.590			N	
07	8.155			N	
08	15.309		Y	Y	Shutdown
09	Off-Line				
10	Off-Line				
11	Off-Line				
12	Off-Line				
13	Off-Line				
14	Off-Line				
15	Off-Line				
16	Off-Line				
17	Off-Line				
18	Off-Line				
19	Off-Line				
20	Off-Line				
21	19.685		Y	Y	Startup
22	12.234		Y	Y	Shutdown
23	Off-Line				

DAILY
AVERAGES: 8.373 0.000

LIMITS: 10.049 42.049

--More--(92%)Hit space to continue, Del to abort.]

The data are from February 13, 2006 for Unit P12. Hours 4, 8, 21, and 22 were excluded for startup/shutdown leaving only hours 6 and 7 from which to calculate a 24-hour average. The Department accessed the adjusted continuous emissions monitoring system (CEMS) data submitted to the Clean Air Markets site for the same date and unit. The values are listed in the following table.

Date	Hour	Operating Time (Hours)	Gross Load MW	Unadjusted NO_x (ppm)	CO₂ Diluent (%)	Adjusted NO_x (ppm)
2/13/2006	5	0.5	16	20.6	1.5	47.1
2/13/2006	6	1	80	7.9	3.1	8.7
2/13/2006	7	1	50	7.5	3.1	8.3
2/13/2006	8	0.75	17	10.9	2.4	15.6
2/13/2006	21	0.75	26	14.6	2.5	20.0
2/13/2006	22	1	38	9.8	2.7	12.4

While 4 hourly emission rate values can be excluded according to the present condition, those 4 hours represent only 3 hours of CEMS data. This would leave another hour to account for a malfunction if one actually occurs. It is also possible that some of the time (some quarter-hours) excluded, can actually be extracted and used when calculation the 24-hour average NO_x concentration. A good candidate is Hour 22 because shutdowns (and their related excess emissions) do not last one hour for these units.

Department Determination

The Department has determined that a change in the condition can be made without resorting to additional time than the allotted 4 hour exclusion for startups, shutdowns and malfunction. No examples where such time was actually insufficient were presented and the request is designed to cover a situation that has yet to occur for these units.

To reduce the probability of a non-excludable malfunction and to maximize the use of more of the available data for use in 24-hour emission averages, the Department will rewrite the condition in terms of excludable minutes. The Department will also more clearly define the events subject to exclusion. The relevant language will be as follows:

- (1) *Startup, Shutdown, and Malfunction:* No more than ~~1 hourly emission rate value~~ 60 minutes of data due to startup shall be excluded per cycle. No more than ~~1 hourly emission rate value~~ 60 minutes of data due to shutdown shall be excluded per cycle. No more than ~~2 hourly emission rate values~~ 120 minutes of data shall be excluded in a 24-hour period due to malfunction. No more than ~~4 hourly emission rate values~~ 240 minutes of data shall be excluded in a 24-hour period due to all startups, shutdowns, and malfunctions. Note: A fuel-switch is not considered “startup”.

Data Exclusion. Except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, each CEMS shall record emissions data at all times including episodes of startup, shutdown, DLN tuning, and malfunction. Emissions data recorded during periods of startup, shutdown, or malfunction may only be excluded from the compliance averages in accordance with the requirements previously specified in this permit. All periods of data excluded shall be consecutive for each episode and only data obtained during the described episodes (startup, shutdown, malfunction, DLN tuning) may be used for the appropriate exclusion periods. To the extent practicable, the permittee shall minimize the duration of data excluded for startup, shutdown and malfunctions. Data recorded during startup, shutdown or malfunction shall not be excluded if the episode was caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented. Best operational practices shall be used to minimize hourly emissions that occur during startup, shutdown and malfunction. Emissions of any quantity or duration that occur entirely or in part from poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented, shall be prohibited. Excluded emissions data shall be summarized in the required quarterly report.

DRAFT PERMIT

PERMITTEE:

Progress Energy Florida, Inc.
6525 Osceola-Polk County Line Road
Intercession City, Florida 32809

Authorized Representative:
Ms. Julie Turner, Plant Manager

Intercession City Plant
DEP File No. 0970014-012-AC
PSD-FL-268B

Facility ID No. 0970014
SIC No. 4931

Permit Expires: December 31, 2008

PROJECT AND LOCATION

This permit defines the methodology for the exclusion of excess emissions data recorded during startups, shutdowns and malfunctions from the calculation of 24-hour nitrogen oxides (NO_x) averages applicable to combustion turbines P12, P13 and P14 at the Intercession City Plant.

The facility is located in Osceola County approximately 3.5 miles west of Intercession City. The address is 6525 Osceola Polk County Line Road, Intercession City, Florida 33848. The Universal Transverse Mercator (UTM) coordinates are Zone 17, 446.3 km E, 3126.0 km N and the map coordinates are Latitude 28° 15' 38", Longitude 81° 32' 51"

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.) and Title 40, Part 60 of the Code of Federal Regulations (CFR). The permittee is authorized to install the proposed equipment in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department.

CONTENTS

- Section 1. General Information
- Section 2. Administrative Requirements
- Section 3. Emissions Units Specific Conditions
- Section 4. Appendices

(DRAFT)

Joseph Kahn, Director (Date)
Division of Air Resource Management

SECTION 1. GENERAL INFORMATION

FACILITY AND PROJECT DESCRIPTION

The existing facility is an electric power generating plant consisting of fourteen combustion turbine peaking units (P1-P14). Units P1-P6 each consists of two gas turbines having a combined capacity of 56.7 megawatts (MW) and firing No. 2 distillate oil. Units P7-P10 each consists of a General Electric Model 7EA gas turbine having a capacity of 96.3 MW and firing natural gas or distillate oil. Unit P11 is a Siemens Model V84.3 having a capacity of 171 MW and firing distillate oil. Units P12, P13 and P14 each consist of a General Electric Model 7EA gas turbine with a nominal generating capacity of 91 MW when firing natural gas or distillate oil

This permit further defines the methodology for the exclusion of excess emissions data recorded during startups, shutdowns and malfunctions from the calculation of 24-hour nitrogen oxides (NO_x) averages applicable to combustion turbines P12, P13 and P14 at the Intercession City Plant.

The following emissions units (EU) are affected by this permitting action.

EU ID	Emission Unit Description
018 019 20	Peaking Units P12, P13, and P14: Each peaking unit consists of a General Electric Model No. PG7121 7EA dual-fuel simple cycle combustion turbine with electrical generator set having a nominal power production output of 91 MW. The units may employ an evaporative cooling system. Dry low-NO _x (DLN) combustion technology is be used to control nitrogen oxide emissions when firing the primary fuel of pipeline natural gas. Water injection is used to control NO _x oxide emissions when firing the backup fuel of low sulfur distillate oil.

REGULATORY CLASSIFICATION

The facility is not a major source of hazardous air pollutants (HAP).

The facility is subject to the acid rain provisions of the Clean Air Act (CAA).

The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.

The facility is a Prevention of Significant Deterioration (PSD) major source of air pollution in accordance with Rule 62-212.400, F.A.C.

The facility includes units is subject to 40 CFR 60, Subpart GG - Standards of Performance for Stationary Gas Turbines.

RELEVANT DOCUMENTS

The permit application and additional information received to make it complete are not a part of this permit; however, the information is specifically related to this permitting action and is on file with the Department. This minor source air construction permit supplements Permit Nos. 268 and 268A issued December 1999 and January 2002 respectively (DEP File Nos. 0970014-003-AC and 0970014-006-AC). Unless otherwise specified, the gas turbine remains subject to the applicable terms and conditions of the two mentioned permit (and their modifications) as well as the current Title V Air Operation Permit (0970014-010-AV).

SECTION 2. ADMINISTRATIVE REQUIREMENTS

REQUIREMENTS

1. Permitting Authority: All documents related to applications for permits to construct, modify, or operate emissions units regulated by this permit shall be submitted to the Bureau of Air Regulation of the Florida Department of Environmental Protection (FDEP) at 2600 Blair Stone Road Mail Station (MS) #5505, Tallahassee, Florida 32399-2400.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Central District Office, Florida Department of Environmental Protection, 3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767. The phone number is 407/894-7555 and the fax number is 407/897-2966.
3. Appendices: Appendix GC (General Conditions) and Appendix CC (Common Conditions).
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403 of the Florida Statutes (F.S.); Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.); and Title 40, Part 60 of the CFR, adopted by reference in Rule 62-204.800, F.A.C. The terms used in this permit have specific meanings as defined in the applicable chapters of the F.A.C. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
7. Title V Permit: The permittee shall apply for a Title V operation permit revision at least 90 days prior to expiration of this permit, but no later than 180 days after completing the gas turbine upgrade to a Model GT 11NMC model and commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

Combined Cycle Unit (EU-001 and 002)

This section of the permit addresses the following emissions units.

EU ID	Emission Unit Description
018 019 20	Peaking Units P12, P13, and P14: Each peaking unit consists of a General Electric Model No. PG7121 7EA dual-fuel simple cycle combustion turbine with electrical generator set having a nominal power production output of 91 MW. The units may employ an evaporative cooling system. Dry low-NO _x (DLN) combustion technology is used to control nitrogen oxide emissions when firing the primary fuel of pipeline natural gas. Water injection is used to control NO _x oxide emissions when firing the backup fuel of low sulfur distillate oil.

ADMINISTRATIVE REQUIREMENTS

1. Previous Permit Conditions: Unless otherwise specified, issuance of this permit does not alter any requirements established in any previously issued air construction or Title V operation permits for the existing gas turbine. Except as specified below, the conditions of this minor air construction permit supplement, and are in addition to, all current valid requirements. [Rule 62-210.300, F.A.C.]

STARTUP, SHUTDOWN, AND MALFUNCTION

Changes in applicable requirements compared with previous permits are indicated in ~~strikeout (deletions)~~ and double-underlined (additions) format.

2. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited. Such preventable emissions shall be included in the calculation of the 24-hour averages compiled by the continuous NO_x emissions monitor. [Rule 62-210.700, F.A.C.; Specific Condition 20 of Permit 0970014-006-AC (PSD-FL-268A)]
3. Alternate Standards and NO_x CEMS Data Exclusion: The following permit conditions establish alternate standards, or allow the exclusion of monitoring data for specifically defined periods of startup, shutdown, and documented malfunction of a gas turbine. These conditions apply only if operators employ the best operational practices to minimize the amount and duration of emissions during such episodes.
 - (a) Opacity: During startup and shutdown, visible emissions excluding water vapor shall not exceed 20% opacity for up to 2.0 hours in any 24-hour period.
 - (b) NO_x CEMS Data Exclusion: For the following identified operational periods, 1-hour NO_x emissions rate values may be excluded from the 24-hour block compliance averages in accordance with the corresponding requirements.
 - (1) Startup, Shutdown, and Malfunction: No more than ~~1 hourly emission rate value~~ 60 minutes of data due to startup shall be excluded per cycle. No more than ~~1 hourly emission rate value~~ 60 minutes of data due to shutdown shall be excluded per cycle. No more than ~~2 hourly emission rate values~~ 120 minutes of data shall be excluded in a 24-hour period due to malfunction. No more than ~~4 hourly emission rate values~~ 240 minutes of data shall be excluded in a 24-hour period due to all startups, shutdowns, and malfunctions. Note: A fuel-switch is not considered "startup".

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

Combined Cycle Unit (EU-001 and 002)

- (2) *Tuning*: If the permittee provides at least five days advance notice prior to a major tuning session performed by the manufacturer's representative, hourly NO_x emissions rate values during tuning may be excluded from the 24-hour block compliance averages. Data excluded due to tuning shall not count towards the limit on total excluded data in a 24-hour period. {Permitting Note: As an example, a major tuning session would occur after a combustor change-out. A tuning session may take a several hours each day over a few days. No more than two major tuning sessions would be expected during any year. Major tuning sessions are intended to return the unit to manufacturer's specifications for efficient operation and should result in lower actual emissions.}

As provided by the authority in Rule 62-210.700(5), F.A.C., the above requirements are established in lieu of the provisions of Rule 62-210.700(1), F.A.C. [Design; Rules 62-210.700(5), 62-4.130, and Rule 62-212.400(BACT), F.A.C.; Specific Condition 21 of Permit 0970014-006 (PSD-FL-268A)]

CONTINUOUS MONITORING REQUIREMENTS

Changes in applicable requirements from previous permits are indicated in ~~strikeout (deletions)~~ and double-underlined (additions) format.

4. NO_x CEMS Requirements: For each gas turbine, the permittee shall install, calibrate, maintain, and operate continuous emissions monitors (CEMS) to measure and record emissions of nitrogen oxides (NO_x) and oxygen (O₂) in a manner sufficient to demonstrate compliance with the standards of this permit. A monitor for carbon dioxide (CO₂) may be used in place of the oxygen monitor, but the system shall be capable of correcting the emissions to 15% oxygen.
- (a) **Performance Specifications**. Each monitor shall be installed in a location that will provide emissions measurements representative of actual stack emissions. Each CEMS shall comply with the corresponding performance specifications that identify location, installation, design, performance, and reporting requirements.
- (1) Each NO_x monitor shall be certified pursuant to 40 CFR Part 75 and shall be operated and maintained in accordance with the applicable requirements of 40 CFR Part 75, Subparts B and C. Record keeping and reporting shall be conducted pursuant to 40 CFR Part 75, Subparts F and G. The RATA tests required for the NO_x monitor shall be performed using EPA Method 7E or 20 as defined in Appendix A of 40 CFR 60. The NO_x monitor shall have dual span capability with a low span (gas) no greater than 30 ppmvd corrected to 15% O₂ and a high span (oil) no greater than 200 ppmvd corrected to 15% O₂.
- (2) Each O₂ (or CO₂) CEMS shall comply with Performance Specification 3 in Appendix B of 40 CFR 60. The O₂ reference method for the annual RATA shall be EPA Method 3A Appendix A of 40 CFR 60.
- (b) **Data Collection**. Each CEMS shall be designed and operated to sample, analyze, and record emissions data evenly spaced over a 1-hour period during all periods of operation. Each 1-hour average shall be computed using at least one data point in each fifteen minute quadrant of the 1-hour block during which the unit combusted fuel. Notwithstanding this requirement, each 1-hour average shall be computed from at least two data points separated by a minimum of 15 minutes. All valid measurements or data points collected during a 1-hour block shall be used to calculate the 1-hour emission averages. If the NO_x CEMS measures concentration on a wet basis, the permittee shall use approved methods for correction of measured emissions to a dry basis (0% moisture). The O₂ (or CO₂) CEMS shall express the 1-hour emission rate values in terms of "percent oxygen by volume". The NO_x CEMS shall express the 1-hour emission averages in terms of "ppmvd corrected to 15% oxygen".

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

Combined Cycle Unit (EU-001 and 002)

- (c) **Compliance Averages.** Compliance with the 24-hour block NO_x emissions standards shall be based on data collected by each required CEMS. The 24-hour block shall start at midnight of each operating day and consist of 24 consecutive 1-hour blocks. For purposes of determining compliance with the emission standards of this permit, missing data shall not be substituted. Instead the 24-hour block average shall be determined using the remaining hourly data in the 24-hour block. If a unit operates continuously throughout the day, the 24-hour block average shall be the average of 24 consecutive 1-hour emission averages. If a unit operates less than 24 hours during the day, the 24-hour block average shall be the average of the available valid 1-hour emission averages collected during actual operation. If monitoring data is authorized for exclusion (due to startup, shutdown, malfunction, or tuning), the 24-hour block average shall be the average of the remaining valid 1-hour emission averages collected during actual operation. In cases of reduced operation or data exclusion, the compliance average will be based on less than 24, 1-hour emission averages. Upon completion of each 24-hour block, the permittee shall determine separate compliance averages for gas firing and oil firing. A 1-hour emissions average that includes any amount of oil firing shall only be included in the compliance average for oil firing. Upon a request from the Department, the NO_x emission rate shall be corrected to ISO conditions to demonstrate compliance with the applicable standards of 40 CFR 60.332.
- (d) **Data Exclusion.** Except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, each CEMS shall record emissions data at all times including episodes of startup, shutdown, DLN tuning, and malfunction. Emissions data recorded during periods of startup, shutdown, or malfunction may only be excluded from the compliance averages in accordance with the requirements previously specified in this permit. All periods of data excluded shall be consecutive for each episode and only data obtained during the described episodes (startup, shutdown, malfunction, DLN tuning) may be used for the appropriate exclusion periods. To the extent practicable, the permittee shall minimize the duration of data excluded for startup, shutdown and malfunctions. Data recorded during startup, shutdown or malfunction shall not be excluded if the episode was caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented. Best operational practices shall be used to minimize hourly emissions that occur during startup, shutdown and malfunction. Emissions of any quantity or duration that occur entirely or in part from poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented, shall be prohibited. Excluded emissions data shall be summarized in the required quarterly report.
- (e) **Reporting:** If a CEMS reports NO_x emissions in excess of a standard, the permittee shall notify the Compliance Authority within one working day with a preliminary report of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Compliance Authority may request a written summary report of the incident.
- (f) **Monitor Availability.** Monitor availability shall not be less than 95% in any calendar quarter. In the event 95% availability is not achieved, the permittee shall provide the Department with a report identifying the problems in achieving 95% availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit.

[Rules 62-204.800, 62-210.700, 62-4.130, 62-4.160(8), F.A.C.; 40 CFR 60.7; Specific Condition 35 of Permit 0970014-006-AC (PSD-FL-268A)]

SECTION 4 - APPENDIX GC

GENERAL CONDITIONS

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
 - a. Have access to and copy and records that must be kept under the conditions of the permit;
 - b. Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
 - c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
 - a. A description of and cause of non-compliance; and
 - b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

SECTION 4 - APPENDIX GC

GENERAL CONDITIONS

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. This permit also constitutes:
 - a. Determination of Best Available Control Technology ();
 - b. Determination of Prevention of Significant Deterioration ();
 - c. Compliance with New Source Performance Standards (X); and
 - d. Compliance with National Emission Standards for Hazardous Air Pollutants for Source Categories ().
14. The permittee shall comply with the following:
 - a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - c. Records of monitoring information shall include:
 - 1) The date, exact place, and time of sampling or measurements;
 - 2) The person responsible for performing the sampling or measurements;
 - 3) The dates analyses were performed;
 - 4) The person responsible for performing the analyses;
 - 5) The analytical techniques or methods used; and
 - 6) The results of such analyses.
15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

Harvey, Mary

From: Harvey, Mary
Sent: Tuesday, March 04, 2008 4:19 PM
To: 'sosbourn@golder.com'; 'Dave.Meyer@pgnmail.com'; 'little.james@epamail.epa.gov'; 'forney.kathleen@epamail.epa.gov'; Bradner, James
Cc: Read, David; Linero, Alvaro; Walker, Elizabeth (AIR); Gibson, Victoria
Subject: Draft Air Permit #0970014-012-AC - Progress Energy Florida, Inc.
Attachments: Cover012-AC.pdf; DPermit012AC.pdf; Notices012AC.pdf; Technical012AC.pdf

Tracking:	Recipient	Delivery	Read
	sosbourn@golder.com		
	Dave.Meyer@pgnmail.com		
	little.james@epamail.epa.gov		
	forney.kathleen@epamail.epa.gov		
	Bradner, James	Delivered: 3/4/2008 4:19 PM	Read: 3/4/2008 5:34 PM
	Read, David	Delivered: 3/4/2008 4:19 PM	Read: 3/4/2008 7:10 PM
	Linero, Alvaro	Delivered: 3/4/2008 4:19 PM	Read: 3/4/2008 4:23 PM
	Walker, Elizabeth (AIR)	Delivered: 3/4/2008 4:19 PM	
	Gibson, Victoria	Delivered: 3/4/2008 4:19 PM	Read: 3/4/2008 4:20 PM

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The document(s) may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible.

The document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site:
<http://www.adobe.com/products/acrobat/readstep.html>.

The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record.

Thank you,

DEP, Bureau of Air Regulation

Harvey, Mary

From: Harvey, Mary
Sent: Tuesday, March 04, 2008 4:21 PM
To: 'Julie.Turner@pgnmail.com'
Subject: FW: Draft Air Permit #0970014-012-AC - Progress Energy Florida, Inc.
Attachments: Cover012-AC.pdf; DPermit012AC.pdf; Notices012AC.pdf; Technical012AC.pdf

From: Harvey, Mary
Sent: Tuesday, March 04, 2008 4:19 PM
To: 'sosbourn@golder.com'; 'Dave.Meyer@pgnmail.com'; 'little.james@epamail.epa.gov'; 'forney.kathleen@epamail.epa.gov'; Bradner, James
Cc: Read, David; Linero, Alvaro; Walker, Elizabeth (AIR); Gibson, Victoria
Subject: Draft Air Permit #0970014-012-AC - Progress Energy Florida, Inc.

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Thank you,

DEP, Bureau of Air Regulation

Harvey, Mary

From: Turner, Julie [julie.turner@pgnmail.com]
To: Harvey, Mary
Sent: Wednesday, March 05, 2008 11:43 AM
Subject: Read: FW: Draft Air Permit #0970014-012-AC - Progress Energy Florida, Inc.

Your message

To: julie.turner@pgnmail.com
Subject:

was read on 3/5/2008 11:43 AM.

Harvey, Mary

From: Bradner, James
To: Harvey, Mary
Sent: Tuesday, March 04, 2008 5:34 PM
Subject: Read: Draft Air Permit #0970014-012-AC - Progress Energy Florida, Inc.

Your message

To: 'sosbourn@golder.com'; 'Dave.Meyer@pgnmail.com'; 'little.james@epamail.epa.gov'; 'forney.kathleen@epamail.epa.gov'; Bradner, James
Cc: Read, David; Linero, Alvaro; Walker, Elizabeth (AIR); Gibson, Victoria
Subject: Draft Air Permit #0970014-012-AC - Progress Energy Florida, Inc.
Sent: 3/4/2008 4:19 PM

was read on 3/4/2008 5:34 PM.

Harvey, Mary

From: Read, David
To: Harvey, Mary
Sent: Tuesday, March 04, 2008 7:10 PM
Subject: Read: Draft Air Permit #0970014-012-AC - Progress Energy Florida, Inc.

Your message

To: 'sosbourn@golder.com'; 'Dave.Meyer@pgnmail.com'; 'little.james@epamail.epa.gov'; 'forney.kathleen@epamail.epa.gov'; Bradner, James
Cc: Read, David; Linero, Alvaro; Walker, Elizabeth (AIR); Gibson, Victoria
Subject: Draft Air Permit #0970014-012-AC - Progress Energy Florida, Inc.
Sent: 3/4/2008 4:19 PM

was read on 3/4/2008 7:10 PM.

Harvey, Mary

From: Bradner, James
Sent: Tuesday, March 04, 2008 5:34 PM
To: Harvey, Mary
Subject: Re: Draft Air Permit #0970014-012-AC - Progress Energy Florida, Inc.

Received--thank you.

----- Original Message -----

From: Harvey, Mary
To: 'sosbourn@golder.com' <sosbourn@golder.com>; 'Dave.Meyer@pgnmail.com' <Dave.Meyer@pgnmail.com>; 'little.james@epamail.epa.gov' <little.james@epamail.epa.gov>; 'forney.kathleen@epamail.epa.gov' <forney.kathleen@epamail.epa.gov>; Bradner, James
Cc: Read, David; Linero, Alvaro; Walker, Elizabeth (AIR); Gibson, Victoria
Sent: Tue Mar 04 16:19:23 2008
Subject: Draft Air Permit #0970014-012-AC - Progress Energy Florida, Inc.

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The document(s) may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible.

The document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site:
<http://www.adobe.com/products/acrobat/readstep.html>.

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Thank you,

DEP, Bureau of Air Regulation

Harvey, Mary

From: Osbourn, Scott [Scott_Osbourn@golder.com]
To: undisclosed-recipients
Sent: Tuesday, March 04, 2008 4:34 PM
Subject: Read: Draft Air Permit #0970014-012-AC - Progress Energy Florida, Inc.

Your message

To: Scott_Osbourn@golder.com
Subject:

was read on 3/4/2008 4:34 PM.

Harvey, Mary

From: Linero, Alvaro
To: Harvey, Mary
Sent: Tuesday, March 04, 2008 4:23 PM
Subject: Read: Draft Air Permit #0970014-012-AC - Progress Energy Florida, Inc.

Your message

To: 'sosbourn@golder.com'; 'Dave.Meyer@pgnmail.com'; 'little.james@epamail.epa.gov'; 'forney.kathleen@epamail.epa.gov'; Bradner, James
Cc: Read, David; Linero, Alvaro; Walker, Elizabeth (AIR); Gibson, Victoria
Subject: Draft Air Permit #0970014-012-AC - Progress Energy Florida, Inc.
Sent: 3/4/2008 4:19 PM

was read on 3/4/2008 4:23 PM.

Harvey, Mary

From: Gibson, Victoria
To: Harvey, Mary
Sent: Tuesday, March 04, 2008 4:20 PM
Subject: Read: Draft Air Permit #0970014-012-AC - Progress Energy Florida, Inc.

Your message

To: 'sosbourn@golder.com'; 'Dave.Meyer@pgnmail.com'; 'little.james@epamail.epa.gov'; 'forney.kathleen@epamail.epa.gov'; Bradner, James
Cc: Read, David; Linero, Alvaro; Walker, Elizabeth (AIR); Gibson, Victoria
Subject: Draft Air Permit #0970014-012-AC - Progress Energy Florida, Inc.
Sent: 3/4/2008 4:19 PM

was read on 3/4/2008 4:20 PM.

Harvey, Mary

From: Forney, Kathleen@epamail.epa.gov
Sent: Friday, March 07, 2008 11:17 AM
To: Harvey, Mary
Subject: Re: Draft Air Permit #0970014-012-AC - Progress Energy Florida, Inc.

Thanks Mary. I was out all last week, that was why I am late. Thanks for the reminder.
:-)

Katy R. Forney
Air Permits Section
EPA - Region 4
61 Forsyth St., SW
Atlanta, GA 30303

Phone: 404-562-9130
Fax: 404-562-9019

"Harvey, Mary"
<Mary.Harvey@dep
.state.fl.us>

03/04/2008 04:19
PM

To
<sosbourn@golder.com>,
<Dave.Meyer@pgrmail.com>, James
Little/R4/USEPA/US@EPA, Kathleen
Forney/R4/USEPA/US@EPA, "Bradner,
James"
<James.Bradner@dep.state.fl.us>
cc
"Read, David"
<David.Read@dep.state.fl.us>,
"Linerero, Alvaro"
<Alvaro.Linerero@dep.state.fl.us>,
"Walker, Elizabeth \ (AIR\)"
<Elizabeth.Walker@dep.state.fl.us
>, "Gibson, Victoria"
<Victoria.Gibson@dep.state.fl.us>
Subject
Draft Air Permit #0970014-012-AC
- Progress Energy Florida, Inc.

Dear Sir/Madam:

Please send a "reply" message verifying receipt of the attached document(s); this may be done by selecting "Reply" on the menu bar of your e-mail software and then selecting "Send". We must receive verification of receipt and your reply will preclude subsequent e-mail transmissions to verify receipt of the document(s).

The document(s) may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible.

P.E. CERTIFICATION STATEMENT

Progress Energy Florida
6525 Osceola-Polk County Line Rd
Intercession City, Florida 33848

Intercession City Power Plant
DEP File No. 0970014-012-AC
NO_x Data Exclusion Conditions

PROJECT DESCRIPTION

The Intercession City Plant located at 6525 Osceola-Polk County Line Road in Osceola County, Florida. This facility is a nominal 1057 megawatts (MW) power plant that consists of fourteen simple cycle intermittent duty combustion turbines (CT). All of the CT are considered to be peaking units that are used primarily during periods of greatest daily or seasonal demand.

The existing facility is an electric power generating plant consisting of fourteen combustion turbine (CT) peaking units (P1-P14). Units P12, P13, and P14 each consist of a General Electric Model 7EA gas turbine with a nominal generating capacity of 91 MW when firing natural gas or distillate oil.

The permittee submitted a permit application to further define the methodology for the exclusion of excess emissions data recorded during startups, shutdowns, and malfunctions from the calculation of 24-hour nitrogen oxides (NO_x) averages applicable to Units P12, P13, and P14. Instead of increasing the period of allowable excludable emissions data from four to six hours per day as requested by the permittee, the Department will allow exclusions of up to 240 minutes of data related to startup, shutdown, and malfunction per day.

The actual effect will be to exclude *less* data as excess emissions and include *more* valid data towards the daily compliance calculation.

I HEREBY CERTIFY that the air pollution control engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including but not limited to the electrical, mechanical, structural, hydrological, and geological features).

Goes with subject file.

al

Alvaro A. Linero, P.E.
Registration Number: 26032





Progress Energy

November 30, 2007

RECEIVED

DEC 06 2007

BUREAU OF AIR REGULATION

Mr. Al Linero, P.E.
DEP/DARM
South Permitting Section
Division of Air Resource Management
2600 Blair Stone Road MS 5500
Tallahassee, Florida 32399-2400

Re: Air Construction Permit No. 0970014-012-AC
Title V Permit No. 0970014-011-AV Revision
Progress Energy Florida—Intercession City Power Plant
Request for Additional Information—Combustion Turbine Nos. 12, 13 and 14

Dear Mr. Linero:

Progress Energy Florida (PEF) is in receipt of the Department's Request for Additional Information (RAI) dated October 10, 2007. The RAI requests additional information related to PEF's requests for additional time for periods of excess emissions during startups, shutdowns and malfunctions, as well as related to the request for a 24-hour averaging period associated with the current heat input limits. This letter serves to notify the Department that PEF is withdrawing the request relating to the heat input limit. Therefore, the responses provided herein are only in relation to the excess emissions issue.

Item 1 of the Department's letter requests additional information to support the rationale for our request for additional time periods of excess emissions during startups, shutdowns and malfunctions. PEF is providing Attachment A, which summarizes the operation of combustion turbine (CT) Nos. 12, 13 and 14 from January 1 to December 31, 2006. Highlighted in yellow are the number of times that these CTs operated twice in one day. This typically occurs during the winter months. The first start up and shut down cycle is required by system demand, when our customers wake up and start their day. The second cycle occurs during the evening, at the end of the day.

The number to the left of the highlighted section indicates the number of hours that have been excluded for start up or shut down. These hours are excluded as they are in excess of the 24-hour average NO_x limit of 10 ppmvd, corrected to 15 percent O₂.

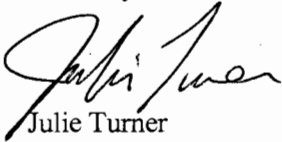
As an example, refer to Attachment B for an illustration of the operating cycle on February 13, 2006. The unit started up at hour 5 and shut down at hour 8 to meet the morning peak demand. The unit again operated at hour 21 and shut down at hour 22 to meet the evening demand. The permit allows a maximum exclusion of four hours. As you can see in this example, we have excluded four hours for startup and shut down. If these CTs were to have a malfunction (for example at hour 07), PEF would not be able to exclude the

Mr. Linero
November 30, 2007
Page 2

malfunction hour and would have a violation of the 24-hour average daily NO_x limit of 10 ppmvd, corrected to 15 percent O₂. In order to avoid a violation for a malfunction event, PEF is requesting that the permit allow for an additional two hours for malfunctions, as requested in our permit application (refer to Attachment C).

As this response letter is in relation to the Department's request for additional information of an engineering nature, a professional engineer certification form, as well as a certification form completed by the facility's responsible official, accompanies this submittal. If you should have any questions regarding this response, please contact Mr. Dave Meyer at (727) 820-5295. Thank you in advance for your timely consideration of this permit revision request.

Sincerely,

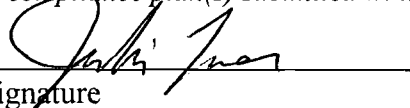


Julie Turner
Plant Manager and Responsible Official

APPLICATION INFORMATION

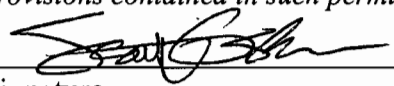
Application Responsible Official Certification

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.”

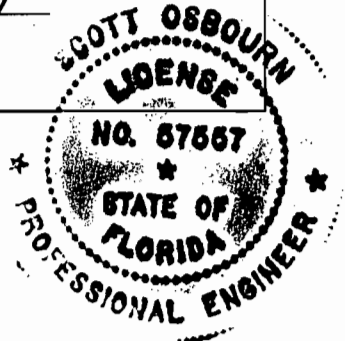
1. Application Responsible Official Name: Julie Turner
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input checked="" type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge 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. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source.
3. Application Responsible Official Mailing Address... Organization/Firm: Florida Power Corporation dba Progress Energy Florida Street Address: 6525 Osceola-Polk County Line Road City: Intercession City State: Osceola Zip Code: 33848
4. Application Responsible Official Telephone Numbers... Telephone: (863) 679-3020 ext. Fax: () -
5. Application Responsible Official Email Address: Julie.Turner@gpnmail.com
6. Application Responsible Official Certification: <i>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.</i> Signature  Date <u>11/30/07</u>

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: Scott Osbourn, Senior Consultant Registration Number: 57557
2. Professional Engineer Mailing Address... Organization/Firm: Golder Associates, Inc.* Street Address: 5100 Lemon Street, Suite 114 City: Tampa State: FL Zip Code: 33609
3. Professional Engineer Telephone Numbers... Telephone: (813) 287 - 1717 ext. 211 Fax: (813) 287 - 1716
4. Professional Engineer Email Address: sosbourn@golder.com
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(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</i> <i>(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.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/> , 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.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input type="checkbox"/> , 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 <input checked="" type="checkbox"/> , 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.</i> <i>(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 <input type="checkbox"/> , 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.</i> Signature <u></u> Date <u>11/16/07</u> (seal)

* Board of Professional Engineers Certificate of Authorization No. 000016



P13

ICP P13 LS2GX = 'CLOSED' and PrevVal(ICP P13 LS2GX)='OPEN' and ICP P13 TNet > 5
ICP P13 LS2GX

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of incidents
5

P12

Reports

Report Date: 02/13/2006

Created: 10/23/2007 09:15

HOUR	EMISSIONS FROM GAS FUEL ppmvd @ 15% O2	EMISSIONS FROM OIL FUEL ppmvd @ 15% O2	EXCEEDS VALUE	EX	EXCLUSION JUSTIFICATION
00	Off-Line				
01	Off-Line				
02	Off-Line				
03	Off-Line				
04	Off-Line				
05	46.291		Y	Y	Startup
06	8.590			N	
07	8.155			N	
08	15.309		Y	Y	Shutdown
09	Off-Line				
10	Off-Line				
11	Off-Line				
12	Off-Line				
13	Off-Line				
14	Off-Line				
15	Off-Line				
16	Off-Line				
17	Off-Line				
18	Off-Line				
19	Off-Line				
20	Off-Line				
21	19.685		Y	Y	Startup
22	12.234		Y	Y	Shutdown
23	Off-Line				

DAILY
AVERAGES: 8.373 0.000
LIMITS: 10.049 42.049

--More--(92%)[Hit space to continue, Del to abort]

Attachment B

60.332 by the performance test required in 40 CFR 60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the performance test required in 40 CFR 60.8. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under 40 CFR 60.335(a).

~~{Permitting Note: A properly installed and maintained NO_x CEMS may be used as an acceptable alternative to measure periods of excess emissions.}~~

B.41. Alternate Standards and NO_x CEMS Data Exclusion: The following permit conditions establish alternate standards or allow the exclusion of monitoring data for specifically defined periods of startup, shutdown, and documented malfunction of a gas turbine. These conditions apply only if operators employ the best operational practices to minimize the amount and duration of emissions during such episodes. For the following identified operational periods, 1-hour NO_x emissions rate values may be excluded from the 24-hour block compliance averages in accordance with the corresponding requirements.

(1) Excess emissions resulting from startup, shutdown and malfunction of any emissions unit shall be permitted providing: (1) best operational practices to minimize emissions are adhered to, and (2) the duration of excess emissions shall be minimized but in no case exceed two hours due to startup or shutdown in any 24 hour period for each startup and shutdown cycle. No more than 2 hourly emission rate values shall be excluded in a 24-hour period due to malfunction. The duration of excess emissions shall be minimized but in no case exceed these durations unless specifically authorized by the Department. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited.

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- (1) ~~Startup, Shutdown, and Malfunction: No more than 1 hourly emission rate value due to startup shall be excluded per cycle. No more than 1 hourly emission rate value due to shutdown shall be excluded per cycle. No more than 2 hourly emission rate values shall be excluded in a 24-hour period due to malfunction. No more than 4 hourly emission rate values shall be excluded in a 24-hour period due to all startups, shutdowns, and malfunctions. Note: A fuel switch is not considered "startup".~~

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C.5. Permitted Capacity: Each combustion turbine shall operate only in simple-cycle mode and generate a nominal 91 MW of electrical power. Operation of each unit shall not exceed 905 MMBtu per hour of heat input from firing natural gas or 978 MMBtu per hour of heat input from firing low sulfur distillate oil (LHV, at 59° F) ~~on a 24-hour rolling average basis.~~ Excluding startup and shutdown, operation below 50% base load is prohibited. The maximum heat inputs are based on the lower heating value (LHV) of each fuel, an inlet air temperature of 59°F, a relative humidity of 60%, an ambient air

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Attachment C1

pressure of 14.7 psi, and 100% of base load. Therefore, heat input rates will vary depending upon ambient conditions and the combustion turbine characteristics. Compliance shall be determined by data compiled from the Speedtronic™ Control System adjusted for these parameters. Manufacturer's performance curves, corrected for site conditions or equations for correction to other ambient conditions, shall have been provided to the Permitting and Compliance Authorities within 45 days of completing the initial compliance testing and shall be resubmitted at any time that they are changed as the result of new testing.

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; and, 0970014-006-AC].

C.18. Alternate Standards and NO_x CEMS Data Exclusion: The following permit conditions establish alternate standards or allow the exclusion of monitoring data for specifically defined periods of startup, shutdown, and documented malfunction of a gas turbine. These conditions apply only if operators employ the best operational practices to minimize the amount and duration of emissions during such episodes.

- (a) **Opacity:** During startup and shutdown, visible emissions excluding water vapor shall not exceed 20% opacity for up to 2.0 hours in any 24-hour period.
- (b) **NO_x CEMS Data Exclusion:** For the following identified operational periods, 1-hour NO_x emissions rate values may be excluded from the 24-hour block compliance averages in accordance with the corresponding requirements.

(1) Excess emissions resulting from startup, shutdown and malfunction of any emissions unit shall be permitted providing: (1) best operational practices to minimize emissions are adhered to, and (2) the duration of excess emissions shall be minimized but in no case exceed two hours due to startup or shutdown in any 24 hour period for each startup and shutdown cycle. No more than 2 hourly emission rate values shall be excluded in a 24-hour period due to malfunction. The duration of excess emissions shall be minimized but in no case exceed these durations unless specifically authorized by the Department. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited.

- (1) ~~Startup, Shutdown, and Malfunction: No more than 1 hourly emission rate value due to startup shall be excluded per cycle. No more than 1 hourly emission rate value due to shutdown shall be excluded per cycle. No more than 2 hourly emission rate values shall be excluded in a 24-hour period due to malfunction. No more than 4 hourly emission rate values shall be excluded in a 24-hour period due to all startups, shutdowns, and malfunctions. Note: A fuel switch is not considered "startup".~~

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Attachment C2



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor

Jeff Kottkamp
E. Governor

Michael W. Sole
Secretary

June 6, 2008

Electronic Mail – Received Receipt Requested

Ms. Julie Turner, Plant Manager
Progress Energy Florida, Inc.
6525 Osceola-Polk County Line Road
Intercession City, Florida 33848

Re: Draft Air Permit No. 0970014-014-AV, Title V Permit Revision
Draft Air Permit No. 0970014-013-AC, Concurrent Air Construction Permit
Intercession City Plant

Dear Ms. Turner:

Enclosed is a permit package to revise the Title V air operation permit and the air construction permit for the Intercession City Plant. This permitting action withdraws draft air construction permit No. 0970014-012-AC issued on March 4, 2008 and replaces it with this permit package. The facility is located in Osceola County at 6525 Osceola-Polk County Line Road, Intercession City, Florida. The permit package includes the following documents:

- The Statement of Basis, which summarizes the facility, the equipment, the primary rule applicability, and the changes since the last Title V revision.
- The Technical Evaluation and Preliminary Determination, which summarizes the minor revisions to specific conditions from existing air construction permits.
- The draft air construction permit and the draft Title V air operation permit revision, which include the specific permit conditions that regulate the emissions units covered by the proposed project.
- The Written Notice of Intent to Issue Air Permits, which provides: the Department's written notice of intent to issue air permits for the proposed project; the requirements for publishing a Public Notice of the Department's intent to issue air permits; the procedures for submitting comments on the Draft Permits; the process for filing a petition for an administrative hearing; and the availability of mediation.
- The Public Notice of Intent to Issue Air Permits which is the actual notice that you must have published in the legal advertisement section of a newspaper of general circulation in the area affected by this project. The Public Notice of Intent to Issue Title V Air Operation Permit Revision must be published as soon as possible and the proof of publication must be provided to the Department within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit revision pursuant to Rule 62-110.106(11), Florida Administrative Code (F.A.C.).

If you have any questions, please contact the project engineer, Russell Wider, P.E., at 850/921-9527, or by email at Russell.Wider@dep.state.fl.us.

Sincerely,

Trina Vielhauer, Chief
Bureau of Air Regulation

Enclosures

TLV/raw