

FINAL DETERMINATION

PERMITTEE

Florida Power Corporation dba
Progress Energy Florida (PEF)
1601 Weedon Island Drive
St. Petersburg, Florida 33711

PERMITTING AUTHORITY

Florida Department of Environmental Protection (Department)
Division of Air Resource Management
Bureau of Air Regulation, Special Projects Section
2600 Blair Stone Road, MS #5505
Tallahassee, Florida 32399-2400

PROJECT

Air Permit No. PSD-FL-381A
Project No. 1030011-012-AC
Bartow Repowering Project Permit Modifications
Progress Energy Florida (PEF) Bartow Power Plant

The project is to modify PSD permit [reference: DEP File No. 1030011-010-AC (PSD-FL-381)] that authorized the replacement of the three residual fuel oil-fired steam electrical generators with a natural gas-fueled combined cycle unit and a natural gas-fueled simple cycle unit. The key modification to this PSD permit is the elimination of an interim period during which the four combustion turbines that comprise the combined cycle unit (presently under construction) can operate in simple cycle (higher emitting) mode. This project does not trigger PSD.

NOTICE AND PUBLICATION

The Department distributed a Notice of Intent to Issue Air Permit package on September 8, 2008. The applicant published the Public Notice of Intent to Issue Air Permit in the St. Petersburg Times on September 15. The Department received the proof of publication on September 25.

COMMENTS

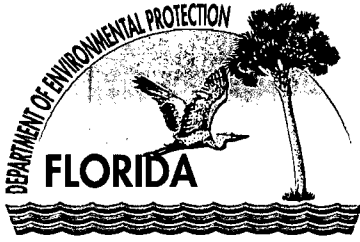
No comments on the Draft Permit were received from the applicant, the public, the Pinellas County Department of Environmental Management Air Quality Division, the Department's Southwest District Office, the EPA Region 4 Office, the National Park Service or the U.S. Fish and Wildlife Service.

Clarification Regarding Condition 6:

The Department added a note to Condition 6 regarding the tuning of combustors. The drafted language striking VOC from the condition (as originally drafted) could have been misconstrued to infer that tuning prior to initial testing does not seek to insure compliance with the VOC emission limit. Instead of striking VOC from the condition, a note will be added indicating that testing is not required during tuning. VOC testing to demonstrate compliance with the applicable limit is nevertheless required by permit conditions.

CONCLUSION

The final action of the Department is to issue the permit as noted during the public notice period.



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blirstone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

October 1, 2008

Electronically Sent – Received Receipt Requested

Thomas.Lawery@pgnmail.com

Mr. Thomas Lawery, Plant Manager
P.L. Bartow Power Plant
Florida Power Corporation dba
Progress Energy Florida (PEF)
1601 Weedon Island Drive
St. Petersburg, Florida 33711

Re: DEP File No. 1030011-012-AC (PSD-FL-381A)
P.L. Bartow Power Plant Repowering Project
Modification of Interim Operation Modes

Dear Mr. Lawery:

On May 6, 2008, PEF submitted a permit modification application requesting changes to certain specific conditions of the air construction permit [reference: DEP File No. 1030011-010-AC (PSD-FL-381)] that authorized the replacement of the three residual fuel oil-fired steam electrical generators with a natural gas-fueled combined cycle unit and a natural gas-fueled simple cycle unit.

The key requested modification to the permit is the elimination of an interim period during which the four combustion turbines that comprise the combined cycle unit (presently under construction) can operate in simple cycle (higher emitting) mode. The requests were assessed in the Department's Technical Evaluation and Preliminary Determination issued on September 8, 2008.

The following sections or conditions in Permit No. 1030011-010-AC (PSD-FL-381) are hereby modified as shown below in strike through (~~strike through~~) and double underline format.

Section III, Subsection A, Emissions Unit Table

The title of the table shall now read:

Emissions Units Comprising Combined Cycle Unit 4 and Simple Cycle Unit 5.

(The rest of the table is unchanged)

- DLN Combustion: The permittee shall install, operate and maintain Dry Low NO_x (DLN) systems to control NO_x emissions from each CT when firing natural gas. Prior to the initial emissions performance tests required for each CT, the DLN combustors and automated combustion turbine control system shall be tuned without a selective catalytic reduction (SCR) system in operation to achieve the permitted CO, VOC and NO_x levels for simple cycle operation. Thereafter, each system shall be maintained and tuned in accordance with the manufacturer's recommendations or industry standards.

{Permitting Note: Specific VOC testing is not required during the tuning conducted prior to the initial compliance test.}

14. Deleted in accordance with Permit Modification 1030011-012-AC.

Temporary Simple Cycle Operation of Two CTs Prior to Permanent Shutdown of Units 1, 2 and 3: The permittee may select any two of the five new CTs to be operated as simple cycle units prior to shutdown of Units 1, 2 and 3. The restrictions included in this condition apply only to those CTs chosen, and only during the described period. Once selected, only those CTs chosen may be operated prior to shutdown of Units 1, 2 and 3 in accordance with the following restrictions:

a. ~~Restriction on SC Operation:~~

- ~~The combined operation of the two CTs shall not exceed 1,100 hours.~~
- ~~A NO_x CEMS shall be installed and operating in each stack prior to startup of the CTs in order to collect and record data for the purpose of demonstrating compliance with this requirement. Notwithstanding the relative accuracy test audit (RATA) grace period described in 40 CFR 75 Appendix B, the NO_x CEMS shall be fully certified in accordance with the requirements of 40 CFR 75 (including a RATA), within 30 operating days but not later than 60 calendar days after startup of the CTs.~~
- ~~Total emissions of NO_x from the two CTs shall not exceed 39 tons during all operation including startups, shutdowns and malfunctions as measured and recorded by the required NO_x continuous emissions monitoring systems (CEMS) during the temporary period. Data recorded before and after CEMS certification shall be included in the calculation.~~
- ~~Each CT shall be stack tested to demonstrate initial compliance with the applicable Subpart KKKK NO_x emission standard for each fuel to be fired. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup of each unit. Data collected during the above described RATA may be used to satisfy this 60 day test requirement provided all requirements of 40 CFR 60.8 and Subpart KKKK are met.~~
- ~~The BACT emissions standards of specific condition 18 do not apply to these CTs prior to Unit 1, 2 and 3 shutdown. Following shutdown of Units 1, 2 and 3 all restrictions of this permit apply, including the BACT limits of specific condition 18.~~

b. ~~Restriction on CC Operation:~~ No combined cycle operation of any unit is allowed prior to permanent shutdown of Units 1, 2, and 3.

c. ~~Monthly Operations Summary:~~ By the 10th calendar day of each month, the permittee shall record the following in a written or electronic log for each CT for the previous month of operation: fuel consumption, hours of operation, NO_x emissions in total tons for the month, and NO_x emissions in total tons for the described restricted period of operation. Information recorded and stored as an electronic file shall be available for inspection and printing within at least three days of a request by the Department. The fuel consumption shall be monitored in accordance with the provisions of 40 CFR 75 Appendix D.

{Permitting note: The limitation on total NO_x emissions and adherence to the emissions standards in Specific Conditions 18, 19 and 20 along with the compliance and recordkeeping requirements of this condition will effectively ensure that emissions increases of all PSD pollutants from the selected CTs operated in SC mode prior to Unit 1, 2 and 3 shutdown will be less than their respective Significant Emissions Rates per Rule 62-210.200 (Definitions-SER), F.A.C.}

[Rules 62-4.070(3), 62-210.200(PTE) and 62-212.400(12)(PSD Avoidance), F.A.C.; 40 CFR 60.8, and 40 CFR Subpart KKKK]

15. Restricted Operation: The permittee shall not exceed the following parameters following shutdown of Units 1, 2 and 3:
- The hours of operation of the CTs are not limited (8,760 hours per year).
 - Distillate oil firing is limited to ~~1,000 hours per CT (i.e. 5,000 hours total aggregate for all five CTs)~~ (based on an average of 1,000 hours per CT) during any consecutive 12-month period.
 - Operation of the DBs is limited to ~~2,434 hours per DB (i.e. 9,736 hours aggregate for four DBs)~~ (based on an average of 2,434 hours per DB) during any consecutive 12-month period.
 - Power (steam) augmentation shall be limited to 6,752 hours aggregate for the four CTs comprising Unit 4 (based on an average of 1,688 hours per CT during any consecutive 12-month period.
 - Other than startup, shutdown, fuel switching or documented malfunction ~~the CTs, shall operate above 70% load during simple cycle operation.~~ simple cycle CT operations shall be at a load not less than 45% or that load at which compliance was demonstrated at initial, whichever is higher.

16. Methods of Operation: Subject to the restrictions and requirements of this permit, the CTs may commence commercial operation and thereafter operate under the following methods of operation after ~~shutdown of Units 1, 2 and 3~~ cease commercial operation:

{Commence commercial operation means to have begun to generate electricity for sale, including the sale of test generation.}

(The rest of Condition 16 is unchanged)

Condition 17, Footnote b. will be modified as follows:

- A CEMS for NO_x shall be installed on the CT stacks and on the HRSG stacks. Correction to 15% O₂ is required ~~not allowed~~ consistent with the provisions of 40 CFR 60, Subpart KKKK.

(The rest of Condition 17 is unchanged)

Condition 18, Footnote c. will be modified as follows:

- CEMS for CO are required only on the HRSG stacks. Other than startup, shutdown, fuel switching or documented malfunction ~~the CTs, shall operate above 70% load during simple cycle operation.~~ simple cycle CT operations shall be at a load not less than 45% or that load at which compliance was demonstrated at initial, whichever is higher.

(The rest of Condition 18 is unchanged)

Condition 20.a. will be modified as follows:

- Visible Emissions*: Visible emissions shall not exceed 10 percent opacity for each 6-minute block average. Compliance with the visible emissions standard shall be demonstrated by conducting tests in accordance with EPA Method 9.23,

(The rest of Condition 20 is unchanged)

Condition 25.d. will be modified as follows:

- Simple Cycle CT Startup*: For startup of a CT for the purpose of operation in simple cycle mode, up to 1 hour or 60 minutes of CEMS data in any 24-hour period of excess emissions can be excluded.

(The rest of Condition 25 is unchanged)

27. Test Methods: Any required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
CTM-027 320	Procedure for Collection and Analysis of Ammonia in Stationary Source. {Notes: This is an EPA conditional test method.} The minimum detection limit shall be 1 ppm. Measurement of Vapor Phase Organic and Inorganic Emissions by Extractive Fourier Transform Infrared (FTIR) Spectroscopy
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources {Notes: The method shall be based on a continuous sampling train.}
18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography {Note: EPA Method 18 may be used (optional) concurrently with EPA Method 25A to deduct emissions of methane and ethane from the measured VOC emissions.}
20	Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines
25A	Determination of Volatile Organic Concentrations

No other methods may be used unless prior written approval is received from the Department.
 [Rules 62-204.800, F.A.C.; 40 CFR 60, Appendix A]

28. Initial Compliance Determinations: Each CT shall be stack tested to demonstrate initial compliance with the emission standards for CO, NO_x, VOC, visible emissions, and ammonia slip. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup of each unit configuration. Each unit shall be tested when firing natural gas, when using the duct burners and when firing distillate fuel oil. Reference method data collected during the required Relative Accuracy Test Audits (RATAs) may be used to demonstrate compliance with the initial CO and NO_x compliance tests. With appropriate flow measurements (or fuel measurements and approved F-factors), CEMS data may be used to demonstrate compliance with the CO mass rate emissions standards. With appropriate flow measurements (or fuel measurements and approved F-factors), the EPA Method 25A instrumental data may be used to demonstrate initial compliance with the VOC mass rate emissions standards. CO and NO_x emissions recorded by the CEMS shall also be reported for each run during tests for visible emissions, VOC and ammonia slip. The Department may require the permittee to conduct additional tests after major replacement or major repair of any air pollution control equipment, such as the SCR catalyst, oxidation catalyst, DLN combustors, etc. [Rule 62-297.310(7)(a)1, F.A.C. and 40 CFR 60.8]

31. CEM Systems: The permittee shall install, calibrate, maintain, and operate continuous emission monitoring systems (CEMS) to measure and record the emissions of CO from the HRSG stacks and NO_x from all stacks in a manner sufficient to demonstrate continuous compliance with the CEMS emission standards of this section. Each monitoring system shall be installed, calibrated, and properly functioning prior to the initial performance tests. Within one working day of discovering emissions in excess of a CO or NO_x standard (and subject to the specified averaging period), the permittee shall notify the Compliance Authority.

- a. *CO Monitors.* The CO monitors shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4 or 4A within 60 calendar days of achieving permitted capacity as defined in Rule 62-297.310(2), F.A.C., but no later than 180 calendar days after initial startup. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F, and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Compliance Authority. The RATA tests required for the CO monitor shall be performed using EPA Method 10 in Appendix A of 40 CFR 60 ~~and shall be based on a continuous sampling train~~. The CO monitor span values shall be set appropriately considering the allowable methods of operation and corresponding emission standards.
- b. *NO_x Monitors.* Each NO_x monitor shall be certified, operated, and maintained in accordance with the requirements of 40 CFR 75. Record keeping and reporting shall be conducted pursuant to Subparts F and G in 40 CFR 75. The RATA tests required for the NO_x monitor shall be performed using EPA Method ~~20 or~~ 7E in Appendix A of 40 CFR 60.
- c. *Diluent Monitors.* The oxygen (O₂) or carbon dioxide (CO₂) content of the flue gas shall be monitored at the location where NO_x and CO are is monitored to correct the measured emissions rates to 15% oxygen. If a CO₂ monitor is installed, the oxygen content of the flue gas shall be calculated using F-factors that are appropriate for the fuel fired. Each monitor shall comply with the performance and quality assurance requirements of 40 CFR 75.

Condition 32, first bullet will be modified as follows:

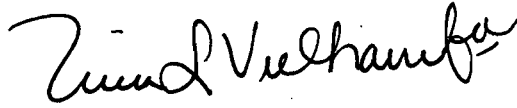
32. CEM Data Requirements:

- *Data Collection:* Emissions shall be monitored and recorded at all times including startup, operation, shutdown, and malfunction except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments. The CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over an hour. If the CEMS measures concentration on a wet basis, the CEM system shall include provisions to determine the moisture content of the exhaust gas and an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Alternatively, the owner or operator may develop through manual stack test measurements a curve of moisture contents in the exhaust gas versus load for each allowable fuel, and use these typical values in an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Final results of the CEMS shall be expressed as ppmvd of NO_x and CO corrected to 15% oxygen ~~and as ppmvd of NO_x (uncorrected)~~. The CEMS shall be used to demonstrate compliance with the CEMS emission standards for CO and NO_x as specified in this permit. For purposes of determining compliance with the CEMS emissions standards of this permit, missing (or excluded) data shall not be substituted. Upon request by the Department, the CEMS emission rates shall be corrected to ISO conditions.

(The rest of Condition 32 is unchanged)

A copy of this letter shall be filed with the referenced permit and shall become part of the permit. Any party to this permitting decision (order) has the right to seek judicial review of it under Section 120.68 of the Florida Statutes, by-filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.



Joseph Kahn, Director
Division of Air Resource Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Permit Modification was sent by electronic mail (or a link to these documents made available electronically on a publicly available server) with received receipt requested before the close of business on

10/1/08 to the persons listed below:

cc: Thomas Lawery, PEF: thomas.lawery@pgnmail.com
Chris Bradley, PEF: chris.bradley@pgnmail.com
Scott Osbourn, P.E., Golder: sosbourn@golder.com
Dee Morse, NPS: dee_morse@nps.gov
Meredith Bond, U.S. FWS: meredith_bond@fws.gov
Kathleen Forney: forney.kathleen@epa.gov
Mara Nasca, DEPSWD: mara.nasca@dep.state.fl.us
Mayor, City of St. Petersburg: mayor@stpete.org
Administrator, Pinellas County: sspratt@pinellascounty.org
Peter Hessling, PCDEM: phesslin@pinellascounty.org
Victoria Gibson, DEP BAR: victoria.gibson@dep.state.fl.us

Clerk Stamp

FILED AND ACKNOWLEDGMENT
FILED, on this date, pursuant to §120.52,
Florida Statutes, with the designated
Department Clerk, receipt of which is hereby
acknowledged.


(Clerk)

10/1/08
(Date)

Florida Department of
Environmental Protection

Memorandum

TO: Joseph Kahn, Division of Air Resource Management

THROUGH: Trina Vielhauer, Bureau of Air Regulation
A. A. Linero, Special Projects Section *caj*

FROM: Teresa Heron, Special Projects Section *T.H.*

DATE: September 30, 2008

SUBJECT: DEP File Nos. 1030011-012-AC (PSD-FL-381A)
P.L. Bartow Power Plant Repowering Project
Modification of Permit – Removal of Interim Operating Mode

The Final Permit for this project is attached for your approval and signature. The project authorizes the modification of the original PSD permit to eliminate the interim period during which the four combustion turbines that comprise the combined cycle unit (presently under construction) can operate in simple cycle (higher emitting) mode. The existing P.L. Bartow Power Plant is located at 1601 Weedon Island Drive in St. Petersburg, Pinellas County, Florida.

We recommend your approval of the attached Final Permit for this project.

Attachments

Livingston, Sylvia

From: Livingston, Sylvia
Sent: Wednesday, October 01, 2008 4:45 PM
To: 'thomas.lawery@pgnmail.com'; 'chris.bradley@pgnmail.com'
Cc: 'sosbourn@golder.com'; 'dee_morse@nps.gov'; 'meredith_bond@fws.gov'; 'forney.kathleen@epa.gov'; Nasca, Mara; 'mayor@stpete.org'; 'sspratt@pinellascounty.org'; 'phesslin@pinellascounty.org'; Gibson, Victoria; 'Abrams.Heather@epamail.epa.gov'; Linero, Alvaro; Heron, Teresa; Walker, Elizabeth (AIR)
Subject: BARTOW PLANT; 1030011-012-AC (PSD-FL-381A)
Attachments: 1030011-012-AC-MOD381A.pdf; 1030011-012-AC-FinalDeter381A.pdf

Dear Sir/ Madam:

Attached is the official Notice of Final Permit for the project referenced below. Click on the link displayed below to access the permit project documents and send a "reply" message verifying receipt of the document(s) provided in the link; this may be done by selecting "Reply" on the menu bar of your e-mail software, noting that you can view the documents, and then selecting "Send". We must receive verification that you are able to access the documents. Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document(s).

Click on the following link to access the permit project documents:

http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/1030011.012.AC.F_pdf.zip

Owner/Company Name: FLORIDA POWER CORPDBAPROGRESS ENERGY FLA
Facility Name: BARTOW PLANT
Project Number: 1030011-012-AC/ PSD-FL-381A
Permit Status: FINAL
Permit Activity: CONSTRUCTION/ BARTOW REPOWERING PROJECT REV
Facility County: PINELLAS

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. Access these documents by clicking on the link provided above, or search for other project documents using the "*Air Permit Documents Search*" website at <http://www.dep.state.fl.us/air/eproducts/apds/default.asp>.

Permit project documents addressed in this email may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible, and verify that they are accessible. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record. If you have any problems opening the documents or would like further information, please contact the Florida Department of Environmental Protection, Bureau of Air Regulation at (850)488-0114.



1030011-012-AC-M
OD381A.pdf (20...



1030011-012-AC-Fi
nalDeter381A....

Sylvia Livingston
Bureau of Air Regulation

Division of Air Resource Management (DARM)
850/921-0771
sylvia.livingston@dep.state.fl.us

Tracking:

Recipient
✓ 'thomas.lawery@pgnmail.com'
✓ 'chris.bradley@pgnmail.com'
'sgsbourn@golder.com'
✓ 'dee_morse@nps.gov'
'meredith_bond@fws.gov'
'forney.kathleen@epa.gov'
✓ Nasca, Mara
'mayor@stpete.org'
'sspratt@pinellascounty.org'
✓ 'phesslin@pinellascounty.org'
Gibson, Victoria
'Abrams.Heather@epamail.epa.gov'
Linero, Alvaro
Heron, Teresa
Walker, Elizabeth (AIR)

Read

Read: 10/1/2008 5:36 PM

Livingston, Sylvia

From: Bradley, Chris [Chris.Bradley@pgnmail.com]
Sent: Wednesday, October 15, 2008 5:30 PM
To: Livingston, Sylvia
Cc: Lawery, Thomas D
Subject: RE: BARTOW PLANT; 1030011-012-AC (PSD-FL-381A)

Good afternoon Ms. Livingston –

Progress Energy received the Bartow Repower project attachments mentioned in your e-mail below on October 01, 2008. However, the attachments were not opened and the link you mention was not accessed until October 02, 2008.

Please consider this e-mail as the reply you have requested. If you have any questions, please contact me.

Best regards,

Chris Bradley
Sr. Environmental Specialist
Technical Services/EHSS Section-POG
Progress Energy Florida, Inc.
Telephone: 727.820.5962
Fax: 727.820.5229
E-mail: Chris.Bradley@pgnmail.com

From: Livingston, Sylvia [mailto:Sylvia.Livingston@dep.state.fl.us]
Sent: Wednesday, October 15, 2008 5:18 PM
To: Lawery, Thomas D; Bradley, Chris
Subject: FW: BARTOW PLANT; 1030011-012-AC (PSD-FL-381A)

We have not received confirmation that you were able to access the documents attached to this October 1st e-mail, as well as the documents provided in the link (http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/1030011.012.AC.F_pdf.zip) referenced in the email. Please confirm receipt by opening the attachment and clicking on the link to the permit documents, and sending a reply to me.

The Division of Air Resource Management is sending electronic versions of these documents rather than sending them Return Receipt Requested via the US Postal service. Your “receipt confirmation” reply serves the same purpose as tracking the receipt of the signed “Return Receipt” card from the US Postal Service. Please let me know if you have any questions.

Sylvia Livingston
Bureau of Air Regulation
Division of Air Resource Management (DARM)
850/921-0771
sylvia.livingston@dep.state.fl.us

10/15/2008

Livingston, Sylvia

From: Dee_Morse@nps.gov
Sent: Thursday, October 02, 2008 12:46 PM
To: Livingston, Sylvia
Subject: Re: BARTOW PLANT; 1030011-012-AC (PSD-FL-381A)

notice received

Dee Morse
Environmental Protection Specialist
Air Resources Division
Natural Resource Program Center
National Park Service
Phone: 303 969-2817
Fax: 303 969-2822
e-mail: dee_morse@nps.gov

"Livingston,
Sylvia"
<Sylvia.Livingsto
n@dep.state.fl.us
>

10/01/2008 04:45
PM AST

<thomas.lawery@pgnmail.com>,
<chris.bradley@pgnmail.com>

To

cc

<sosbourn@golder.com>,
<dee_morse@nps.gov>,
<meredith_bond@fws.gov>,
<forney.kathleen@epa.gov>, "Nasca,
Mara" <Mara.Nasca@dep.state.fl.us>,
<mayor@stpete.org>,
<sspratt@pinellascounty.org>,
<phesslin@pinellascounty.org>,
"Gibson, Victoria"
<Victoria.Gibson@dep.state.fl.us>,
<Abrams.Heather@epamail.epa.gov>,
"Liner, Alvaro"
<Alvaro.Liner@dep.state.fl.us>,
"Heron, Teresa"
<Teresa.Heron@dep.state.fl.us>,
"Walker, Elizabeth \ (AIR\)"
<Elizabeth.Walker@dep.state.fl.us>

Subject

BARTOW PLANT; 1030011-012-AC
(PSD-FL-381A)

Dear Sir/ Madam:

Attached is the official Notice of Final Permit for the project referenced below. Click on the link displayed below to access the permit project documents and send a "reply" message verifying receipt of the document(s) provided in the link; this may be done by selecting "Reply" on the menu bar of your e-mail software, noting that you can view the documents, and then selecting "Send". We must receive verification that you are able to access the documents. Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document(s).

Click on the following link to access the permit project documents:
http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/1030011.012.AC.F_pdf.zip

Owner/Company Name: FLORIDA POWER CORPDBAPROGRESS ENERGY FLA Facility Name: BARTOW PLANT
Project Number: 1030011-012-AC/ PSD-FL-381A Permit Status: FINAL Permit Activity:
CONSTRUCTION/ BARTOW REPOWERING PROJECT REV Facility County: PINELLAS

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. Access these documents by clicking on the link provided above, or search for other project documents using the "Air Permit Documents Search" website at <http://www.dep.state.fl.us/air/eproducts/apds/default.asp> .

Permit project documents are addressed in this email may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible, and verify that they are accessible. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record. If you have any problems opening the documents or would like further information, please contact the Florida Department of Environmental Protection, Bureau of Air Regulation at (850)488-0114.

<<1030011-012-AC-MOD381A.pdf>> <<1030011-012-AC-FinalDeter381A.pdf>>

Sylvia Livingston
Bureau of Air Regulation
Division of Air Resource Management (DARM)
850/921-0771
sylvia.livingston@dep.state.fl.us

The Department of Environmental Protection values your feedback as a customer. DEP Secretary Michael W. Sole is committed to continuously assessing and improving the level and quality of services provided to you. Please take a few minutes to comment on the quality of service you received. Simply click on this link to the DEP Customer Survey. Thank you in advance for completing the survey. [attachment "1030011-012-AC-MOD381A.pdf" deleted by Dee Morse/DENVER/NPS] [attachment "1030011-012-AC-FinalDeter381A.pdf" deleted by Dee Morse/DENVER/NPS]

Livingston, Sylvia

From: Hessling, Peter A [phesslin@co.pinellas.fl.us]
Sent: Thursday, October 02, 2008 11:38 AM
To: Livingston, Sylvia
Subject: RE: BARTOW PLANT; 1030011-012-AC (PSD-FL-381A)

Documents received and viewable.
Thank you.

Peter Hessling
Air Quality Division Director
Pinellas Co. Dept. of Envir. Mgt.

From: Livingston, Sylvia [mailto:Sylvia.Livingston@dep.state.fl.us]
Sent: Wednesday, October 01, 2008 4:45 PM
To: thomas.lawery@pgnmail.com; chris.bradley@pgnmail.com
Cc: sosbourn@golder.com; dee_morse@nps.gov; meredith_bond@fws.gov; forney.kathleen@epa.gov; Nasca, Mara; mayor@stpete.org; sspratt@pinellascounty.org; Hessling, Peter A; Gibson, Victoria; Abrams.Heather@epamail.epa.gov; Linero, Alvaro; Heron, Teresa; Walker, Elizabeth (AIR)
Subject: BARTOW PLANT; 1030011-012-AC (PSD-FL-381A)

Dear Sir/ Madam:

Attached is the official Notice of Final Permit for the project referenced below. Click on the link displayed below to access the permit project documents and send a "reply" message verifying receipt of the document(s) provided in the link; this may be done by selecting "Reply" on the menu bar of your e-mail software, noting that you can view the documents, and then selecting "Send". We must receive verification that you are able to access the documents. Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document (s).

Click on the following link to access the permit project documents:

http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/1030011.012.AC.F_pdf.zip

Owner/Company Name: FLORIDA POWER CORPDBAPROGRESS ENERGY FLA
Facility Name: BARTOW PLANT
Project Number: 1030011-012-AC/ PSD-FL-381A
Permit Status: FINAL
Permit Activity: CONSTRUCTION/ BARTOW REPOWERING PROJECT REV
Facility County: PINELLAS

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. Access these documents by clicking on the link provided above, or search for other project documents using the "*Air Permit Documents Search*" website at <http://www.dep.state.fl.us/air/eproducts/apds/default.asp>.

Permit project documents are addressed in this email may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible, and verify that they are accessible. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record. If you have any problems opening the documents or would like further information, please contact the Florida Department of Environmental Protection, Bureau of Air Regulation at (850)488-0114.

10/2/2008

Livingston, Sylvia

From: Nasca, Mara
Sent: Wednesday, October 01, 2008 5:23 PM
To: Livingston, Sylvia
Cc: Prickett, Patricia; Zhang-Torres
Subject: RE: BARTOW PLANT; 1030011-012-AC (PSD-FL-381A)

Thanks Sylvia...have a good evening

From: Livingston, Sylvia
Sent: Wednesday, October 01, 2008 4:45 PM
To: 'thomas.lawery@pgnmail.com'; 'chris.bradley@pgnmail.com'
Cc: 'sosbourn@golder.com'; 'dee_morse@nps.gov'; 'meredith_bond@fws.gov'; 'forney.kathleen@epa.gov'; Nasca, Mara; 'mayor@stpete.org'; 'sspratt@pinellascounty.org'; 'phesslin@pinellascounty.org'; Gibson, Victoria; 'Abrams.Heather@epamail.epa.gov'; Linero, Alvaro; Heron, Teresa; Walker, Elizabeth (AIR)
Subject: BARTOW PLANT; 1030011-012-AC (PSD-FL-381A)

Dear Sir/ Madam:

Attached is the official Notice of Final Permit for the project referenced below. Click on the link displayed below to access the permit project documents and send a "reply" message verifying receipt of the document(s) provided in the link; this may be done by selecting "Reply" on the menu bar of your e-mail software, noting that you can view the documents, and then selecting "Send". We must receive verification that you are able to access the documents. Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document(s).

Click on the following link to access the permit project documents:

http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/1030011.012.AC.F_pdf.zip

Owner/Company Name: FLORIDA POWER CORPDBAPROGRESS ENERGY FLA
Facility Name: BARTOW PLANT
Project Number: 1030011-012-AC/ PSD-FL-381A
Permit Status: FINAL
Permit Activity: CONSTRUCTION/ BARTOW REPOWERING PROJECT REV
Facility County: PINELLAS

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. Access these documents by clicking on the link provided above, or search for other project documents using the "*Air Permit Documents Search*" website at <http://www.dep.state.fl.us/air/eproducts/apds/default.asp>.

Permit project documents addressed in this email may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible, and verify that they are accessible. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record. If you have any problems opening the documents or would like further information, please contact the Florida Department of Environmental Protection, Bureau of Air Regulation at (850)488-0114.

<< File: 1030011-012-AC-MOD381A.pdf >> << File: 1030011-012-AC-FinalDeter381A.pdf >>

Sylvia Livingston

St. Petersburg Times

Published Daily

St. Petersburg, Pinellas County, Florida

STATE OF FLORIDA
COUNTY OF Pinellas

} S.S.

Before the undersigned authority personally appeared A. Robison who on oath says that he/she is Legal Clerk of the *St. Petersburg Times* a daily newspaper published at St. Petersburg, in Pinellas County, Florida; that the attached copy of advertisement, being a Legal Notice in the matter RE: **PROGRESS ENERGY PL BARTOW REPOWER DRAFT PERMIT REVISION PUB** was published in said newspaper in the issues of *City & State*, 9/15/2008.

Affiant further says the said *St. Petersburg Times* is a newspaper published at St. Petersburg, in said Pinellas County, Florida and that the said newspaper has heretofore been continuously published in said Pinellas County, Florida, each day and has been entered as second class mail matter at the post office in St. Petersburg, in said Pinellas County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement, and affiant further says that he/she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Amy J. Robison

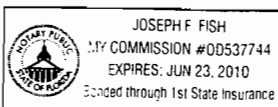
Signature of Affiant

Sworn to and subscribed before me
this 15th day of September A.D.2008

Joseph F. Fish
Signature of Notary Public

Personally known or produced identification

Type of identification produced _____



RECEIVED

SEP 25 2008

BUREAU OF AIR REGULATION

LEGAL NOTICE

LEGAL NOTICE

PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT MODIFICATION

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DEP File No. 1030011-012-AC (PSD-FL-381A)
Florida Power Corporation dba Progress Energy Florida, Inc.
P.L. Bartow Power Plant Repowering Project
Pinellas County

Applicant: The applicant for this project is Florida Power Corporation dba Progress Energy of Florida (PEF), Inc. The applicant's authorized representative and mailing address is: Mr. Thomas Lawery, Plant Manager, P.L. Bartow Power Plant, 1601 Weedon Island Drive in St. Petersburg, Pinellas County, Florida.

Facility and Location: PEF operates the existing P.L. Bartow Power Plant, which is located in Pinellas County at 1601 Weedon Island Drive, St. Petersburg. The plant is located approximately 83 kilometers south of the Prevention of Significant Deterioration (PSD) Class I Chassahowitzka Wilderness Area. The facility UTM coordinates are Zone 17, 342.4 km East and 3,082.8 km North. The existing facility consists of three residual fuel oil-fired steam electrical generators, four simple cycle combustion turbines, a pipeline heating boiler and relocatable diesel generators.

Project: The applicant proposes to modify certain specific conditions of a recently-issued PSD permit applicable to the P.L. Bartow Power Plant. The PSD permit (reference: DEP File No. 1030011-010-AC (PSD-FL-381)) authorized the replacement of the three residual fuel oil-fired steam electrical generators with a natural gas-fueled combined cycle unit and a natural gas-fueled simple cycle unit. The key modification to the PSD permit is the elimination of an interim period during which the four combustion turbines that comprise the combined cycle unit (presently under construction) can operate in simple cycle (higher emitting) mode. Other changes include additional time to comply with the best available control technology (BACT) for carbon monoxide emissions. This project does not trigger PSD.

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 modification is required to perform the proposed work. 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 address indicated above for the Permitting Authority. The complete project file includes the Draft Permit Modification, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address or phone number listed above. In addition, electronic copies of these documents are available by entering the file number provided above where indicated on the following web site:

<http://www.dep.state.fl.us/air/products/apds/default.asp>

Notice of Intent to Issue Permit Modification: The Permitting Authority gives notice of its intent to issue an air permit modification (permit) to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the 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 comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Comments: The Permitting Authority will accept written comments concerning the proposed Draft Permit for a period of 14 days from the date of publication of the Public Notice. Written comments must be received by the Permitting Authority by close of business (5:00 p.m.) on or before the end of this 14-day period. If written comments received result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within 14 days of publication of this Public Notice or receipt of a written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 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, F.A.C.

A petition that disputes the material facts on which the Permitting Authority'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 when and how each petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (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 specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the 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 Permitting Authority'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, F.A.C.

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. 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 in this proceeding.

Walker, Elizabeth (AIR)

From: Walker, Elizabeth (AIR)
Sent: Monday, June 30, 2008 9:50 AM
To: Nasca, Mara
Cc: Zhang-Torres; Heron, Teresa
Subject: RAI Response for Bartow Repowering Project (1030011-012-AC/PSD-381A)
Attachments: 1030011-012-AC RAI Resp.pdf

A hard-copy of this document is available upon request.

ARMS PA Project ID:	1030011-012-AC
PSD	YES NO PSD-FL-381A

Facility Name:	Progress Energy, Bartow Power Plant
Project Description:	Bartow Repowering Project Revisions
Permit Application Processor:	Teresa Heron
Processor Phone:	850/488-0114
Processor Email Address:	Teresa.Heron@dep.state.fl.us
Application Submitted:	May 6, 2008
Draft Permit Issued:	N/A
Document Description:	Response from Applicant regarding a Request for Additional Information (RAI – sent May 30, 2008)

Elizabeth Walker
Bureau of Air Regulation
Division of Air Resource Management (DARM)
(850)921-9505

Tracking:

Recipient

Nasca, Mara

Zhang-Torres

Heron, Teresa

Delivery

Delivered: 6/30/2008 9:50 AM

Delivered: 6/30/2008 9:50 AM

Delivered: 6/30/2008 9:50 AM



June 17, 2007

Florida Department of Environmental Protection
Division of Air Resource Management
2600 Blair Stone Road, MS 5500
Tallahassee, Florida 32399-2400

RECEIVED

JUN 20 2008

BUREAU OF AIR REGULATION

Attention: Mr. A. A. Linero

RE: Response to request for Additional Information
Bartow Power Plant Repowering Project
Facility ID No: 1030011

Dear Mr. Linero:

This letter is in response to your request for additional information (RAI) regarding the requested permit revisions for the Bartow Power Plant Repowering Project submitted on May 6, 2008. Specifically, the Department has requested a rationale for each of the requested permit revisions. For reference, the requested revised permit language is included as an attachment to this letter response.

Section III.A – Table:

Addition of “and Simple Cycle Unit 5” – To be consistent with the content of the table that includes Unit 5 – one 195 MW (ISO) Combustion Turbine in addition to Units 4A, 4B, 4C and 4D.

Condition No. 6.

Addition of “For VOCs, while the intent is to tune for compliance with the permit limit, emissions of CO are a representative surrogate. Therefore, VOC monitoring is not required during the tuning process.” This change is to address the inherent difficulty of continuously monitoring for VOC while tuning. Continuously monitoring for CO while tuning the combustion turbine is less expensive and just as accurate. In addition, CO has generally been an acceptable surrogate for VOC. As required by the permit, Progress Energy will conduct compliance testing for VOCs after the tuning is completed.

Condition No. 14.

The facility no longer intends to operate in the identified mode; i.e., “Temporary Simple Cycle Operation of Two CTs Prior to Permanent Shutdown of Units 1, 2 and 3”. Therefore, in order to eliminate any ambiguity in interpretation by the compliance authority regarding any part of this condition, Progress Energy requests that this condition be eliminated.

Condition No. 15:

Based on conversations with the DARM Permitting Staff, the intent of this condition was to present the number of operational hours as an aggregate total and was not intended to restrict operational flexibility. Therefore, Progress Energy requests that Condition 15.b, c & d be revised to specifically note the hours are intended to be an aggregate so as to avoid ambiguity and to provide the maximum operational flexibility to the facility.

St. Petersburg Times

Published Daily

St. Petersburg, Pinellas County, Florida

STATE OF FLORIDA }
COUNTY OF Pinellas } s.s.

Before the undersigned authority personally appeared **A. Robison** who on oath says that he/she is **Legal Clerk** of the **St. Petersburg Times** a daily newspaper published at St. Petersburg, in Pinellas County, Florida; that the attached copy of advertisement, being a **Legal Notice** in the matter **RE: PROGRESS ENERGY PL BARTOW REPOWER DRAFT PERMIT REVISION PUB** was published in said newspaper in the issues of **City & State**, **9/15/2008**.

Affiant further says the said **St. Petersburg Times** is a newspaper published at St. Petersburg, in said Pinellas County, Florida and that the said newspaper has heretofore been continuously published in said Pinellas County, Florida, each day and has been entered as second class mail matter at the post office in St. Petersburg, in said Pinellas County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement, and affiant further says that he /she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Amy J. Robison

Signature of Affiant

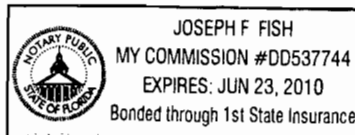
Sworn to and subscribed before me
this **15th** day of **September** **A.D.2008**

Joseph F. Fish

Signature of Notary Public

Personally known or produced identification

Type of identification produced _____



RECEIVED

SEP 25 2008

BUREAU OF AIR REGULATION

PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT MODIFICATION

STATE OF FLORIDA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 DEP File No. 1030011-012-AC (PSD-FL-381A)
 Florida Power Corporation dba Progress Energy Florida, Inc.
 P.L. Bartow Power Plant Repowering Project
 Pinellas County

Applicant: The applicant for this project is Florida Power Corporation dba Progress Energy of Florida (PEF), Inc. The applicant's authorized representative and mailing address is: Mr. Thomas Lawery, Plant Manager, P.L. Bartow Power Plant, 1601 Weedon Island Drive in St. Petersburg, Pinellas County, Florida.

Facility and Location: PEF operates the existing P.L. Bartow Power Plant, which is located in Pinellas County at 1601 Weedon Island Drive, St. Petersburg. The plant is located approximately 83 kilometers south of the Prevention of Significant Deterioration (PSD) Class I Chassahowitzka Wilderness Area. The facility UTM coordinates are Zone 17, 342.4 km East and 3,082.6 km North. The existing facility consists of three residual fuel oil-fired steam electrical generators, four simple cycle combustion turbines, a pipeline heating boiler and relocatable diesel generators.

Project: The applicant proposes to modify certain specific conditions of a recently-issued PSD permit applicable to the P.L. Bartow Power Plant. The PSD permit [reference: DEP File No. 1030011-010-AC (PSD-FL-381)] authorized the replacement of the three residual fuel oil-fired steam electrical generators with a natural gas-fueled combined cycle unit and a natural gas-fueled simple cycle unit. The key modification to the PSD permit is the elimination of an interim period during which the four combustion turbines that comprise the combined cycle unit (presently under construction) can operate in simple cycle (higher emitting) mode. Other changes include additional time to comply with the best available control technology (BACT) for carbon monoxide emissions. This project does not trigger PSD.

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 modification is required to perform the proposed work. 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 address indicated above for the Permitting Authority. The complete project file includes the Draft Permit Modification, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address or phone number listed above. In addition, electronic copies of these documents are available by entering the file number provided above where indicated on the following web site:

<http://www.dep.state.fl.us/air/eproducts/apds/default.asp>

Notice of Intent to Issue Permit Modification: The Permitting Authority gives notice of its intent to issue an air permit modification (permit) to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the 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 comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Comments: The Permitting Authority will accept written comments concerning the proposed Draft Permit for a period of 14 days from the date of publication of the Public Notice. Written comments must be received by the Permitting Authority by close of business (5:00 p.m.) on or before the end of this 14-day period. If written comments received result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within 14 days of publication of this Public Notice or receipt of a written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 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, F.A.C.

A petition that disputes the material facts on which the Permitting Authority'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 when and how each petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (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 specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the 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 Permitting Authority'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, F.A.C.

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. 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 in this proceeding.

Condition No. 15.e:

Progress Energy believes that if the combustion turbines can demonstrate compliance with applicable emission standards by conducting an initial test while operating at less than 70 percent load, thereby providing reasonable assurance, that the facility should not be limited in its operational flexibility. Therefore, Progress Energy respectfully requests the addition of the proposed language.

Condition No. 16:

Progress Energy requests clarification of this condition in an effort to minimize any misunderstanding by either Progress Energy or the Compliance Authority. Specifically, Progress Energy will be operating the combustion turbines in combined and simple cycle modes before the shutdown of Unit Nos. 1, 2 and 3; however, the operation of the turbines will be specifically for the purposes of commissioning, tuning and compliance testing before Progress Energy accepts the units for transfer of ownership. However, performing these tasks requires the combustion turbine units to "sync to the grid" (i.e., production and distribution of power); therefore, Progress Energy requests the change in the condition language for clarification purposes.

Condition 17.b

Progress Energy requests this change so that the permit condition language is consistent with the federal rule language contained in 40 CFR Part 60, Subpart KKKK.

Condition No. 18.c:

Progress Energy believes that if the combustion turbines can demonstrate compliance with applicable emission standards by conducting an initial test while operating at less than 70 percent load, thereby providing reasonable assurances, that the facility should not be limited in its operational flexibility. Therefore, Progress Energy respectfully requests the addition of the proposed language.

Condition No. 18.f:

Progress Energy requests the inclusion of the enforcement discretion for the 8.0 ppmvd @ 15 percent O₂ 24-hour block on CO in addition to the enforcement discretion associated with the 12-month rolling average for CO. The discretion should logically apply to both standards.

Condition No. 19:

Progress Energy requests the addition of this language for clarification purposes.

Condition No. 20.b:

Progress Energy requests the removal of what appears to be a typographical error.

Condition No. 25.d

Progress Energy requests the removal of this condition as it is more restrictive than the two (2) hours of possible exclusion under the Florida Administrative Code (F.A.C.).

Condition 27:

Progress Energy requests the removal of EPA Method 20 as an acceptable method so that the permit condition language is consistent with the federal rule language.

Condition Nos. 17.b, 30 & 31

Progress Energy requests the proposed language changes for these conditions in an effort to reflect current regulations and regulator language.

Mr. A. A. Linero
June 17, 2008
Page 3 of 3

In accordance with Rule 62-4.050(3), F.A.C., attached to this RAI response is a professional engineer certification. Please do not hesitate to contact me at (727) 820-5962, if you should require additional information.

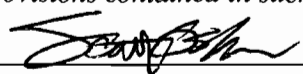
Sincerely,

A handwritten signature in cursive script that reads "Chris Bradley". The signature is written in black ink and is positioned below the word "Sincerely,".

Chris Bradley
Senior Environmental Specialist

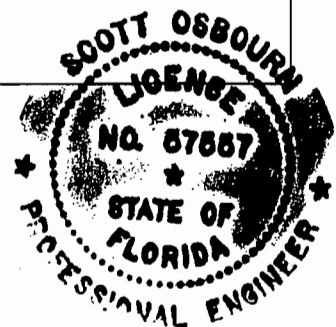
Enclosures

Professional Engineer Certification

1. Professional Engineer Name: Scott H. Osbourn Registration Number: 57557
2. Professional Engineer Mailing Address... Organization/Firm: Golder Associates Inc.** Street Address: 5100 West Lemon Street, Suite 114 City: Tampa State: FL Zip Code: 33609
3. Professional Engineer Telephone Numbers... Telephone: (813) 287-1717 ext. 53304 Fax: (813) 287-1716
4. Professional Engineer E-mail Address: <u>sosbourn@golder.com</u>
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 checked="" 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 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>6/17/08</u> (seal)

* Attach any exception to certification statement.

**Board of Professional Engineers Certificate of Authorization #00001670.



SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

This section of the permit addresses the following emissions unit.

E.U. ID	Emissions Units Comprising Combined Cycle Unit 4 and Simple Cycle Unit 5
038	Unit 4A – One 215 MW (ISO) Combustion Turbine with Duct-fired Heat Recovery Steam Generator
039	Unit 4B – One 215 MW (ISO) Combustion Turbine with Duct-fired Heat Recovery Steam Generator
040	Unit 4C – One 215 MW (ISO) Combustion Turbine with Duct-fired Heat Recovery Steam Generator
041	Unit 4D – One 215 MW (ISO) Combustion Turbine with Duct-fired Heat Recovery Steam Generator
042	Unit 5 – One 195 MW (ISO) Combustion Turbine

APPLICABLE STANDARDS AND REGULATIONS

1. **PSD Applicability and BACT Determinations:** The Rules for the Prevention of Significant Deterioration (PSD) of Air Quality apply to this project and Best Available Control Technology (BACT) determinations were made for carbon monoxide (CO) and volatile organic compounds (VOC).

See Appendix BD of this permit for a summary of the final BACT determinations.
[Rules 62-210.200 (Definitions) and 62-212.400, F.A.C.]

[Permitting Note: The repowering project does not trigger PSD or require a BACT determination for NO_x, SO₂, sulfuric acid mist or PM/PM₁₀ because emissions reductions from the permanent shutdown of existing fossil fueled steam generating Units 1, 2 and 3 will exceed emissions increases from the project by values greater than the respective significant emissions rates.]

2. **NSPS Requirements:** Each CT shall comply with all applicable requirements of 40 CFR 60, listed below, adopted by reference in Rule 62-204.800(7)(b), F.A.C.
 - a. *Subpart A - General Provisions*, including:
 - 40 CFR 60.7, Notification and Record Keeping
 - 40 CFR 60.8, Performance Tests
 - 40 CFR 60.11, Compliance with Standards and Maintenance Requirements
 - 40 CFR 60.12, Circumvention
 - 40 CFR 60.13, Monitoring Requirements
 - 40 CFR 60.19, General Notification and Reporting Requirements
 - b. *Subpart KKKK - Standards of Performance for Stationary Combustion Turbines:* These provisions were finalized on July 6, 2006 and include requirements applicable to duct burners located in HRSGs.
3. **NESHAP Requirements:** The CTs are subject to 40 CFR 63, Subpart A - Identification of General Provisions and 40 CFR 63, Subpart YYYYY - National Emissions Standard for Hazardous Air Pollutants for Stationary Combustion Turbines.

EQUIPMENT AND CONTROL TECHNOLOGY

4. **Combustion Turbines (CTs):** The permittee is authorized to install, tune, operate, and maintain five Model SGT6-5000F CT-electrical generator sets. Each CT shall include an automated control system and have dual-fuel capability. Ancillary equipment includes an inlet air filtration system, evaporative inlet air-cooling system and a nominal 120 foot exhaust stack for simple cycle operation.
[Application No. 1030011-010-AC; Design]
5. **Heat Recovery Steam Generators (HRSGs):** The permittee is authorized to install, operate, and maintain four new duct-fired HRSGs that recover exhaust heat energy from four of the CTs and deliver steam to a nominal 420 MW steam turbine electrical generator. Each HRSG shall be equipped with a nominal 120 foot

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

exhaust stack for combined cycle operation. [Application No. 1030011-010-AC; Design]

6. DLN Combustion: The permittee shall install, operate and maintain Dry Low NO_x (DLN) systems to control NO_x emissions from each CT when firing natural gas. Prior to the initial emissions performance tests required for each CT, the DLN combustors and automated combustion turbine control system shall be tuned without a selective catalytic reduction (SCR) system in operation to achieve the permitted CO, VOC and NO_x levels for simple cycle operation. **For VOCs, while the intent is to tune for compliance with the permit limit, emissions of CO are a representative surrogate. Therefore, VOC monitoring is not required during the tuning process.** Thereafter, each system shall be maintained and tuned in accordance with the manufacturer's recommendations or industry standards.
[Application No. 1030011-010-AC; Design]
7. Water Injection: The permittee shall install, operate, and maintain a water injection system to reduce NO_x emissions from each CT when firing distillate fuel oil. Prior to the initial emissions performance tests, the water injection system shall be tuned without an SCR system in operation to achieve the NO_x value for simple cycle operation. Thereafter, each system shall be maintained and tuned in accordance with the manufacturer's recommendations or industry standards. [Application No. 1030011-010-AC; Design]
8. Selective Catalytic Reduction Systems: The permittee is authorized to install, tune, operate, and maintain a selective catalytic reduction (SCR) system within each HRSG to control NO_x emissions from each of the four CT/Duct-fired HRSGs comprising the combined cycle unit. The SCR system consists of an ammonia (NH₃) injection grid, catalyst, ammonia storage, monitoring and control system, electrical, piping and other ancillary equipment. The SCR system shall be designed, constructed and operated to achieve the permitted levels for NO_x and NH₃ emissions. Operation of the SCR systems is not required when the NO_x emission limits can be met without their use.
[Application No. 1030011-010-AC; Design, and 62-210.650 (Circumvention), F.A.C.]
9. Oxidation Catalyst Systems: The permittee shall design and build the project to facilitate future installation of an oxidation catalyst system within each HRSG to control CO and VOC emissions from each of the four CTs/Duct-fired HRSGs comprising the combined cycle unit. The permittee may install oxidation catalyst during project construction or, after notifying the Department, at a future date as described in Specific Condition 18.f. [Rule 62-4.070(3) F.A.C.]
10. Ammonia Storage: In accordance with 40 CFR 60.130, the storage of ammonia shall comply with all applicable requirements of the Chemical Accident Prevention Provisions in 40 CFR 68.
[Rule 62-4.070 F.A.C.]

PERFORMANCE RESTRICTIONS

- i1. Authorized Fuels: Each CT shall fire only natural gas and distillate oil. The maximum sulfur content of natural gas shall not exceed 2.0 grains of sulfur per 100 standard cubic feet of natural gas. The maximum sulfur content of distillate oil shall not exceed 0.05% by weight.
[Design; Rules 62-4.070 and 62-210.200 (Definitions - PTE), F.A.C.; 40 CFR 60, Subpart KKKK]
- i2. Permitted Capacity - Combustion Turbines: The nominal heat input rate excluding steam for power augmentation to each CT is 1,972 MMBtu per hour when firing natural gas and 1,876 MMBtu per hour when firing distillate fuel oil based on a compressor inlet air temperature of 59° F, the higher heating value (HHV) of each fuel, and 100% load. Heat input rates will vary depending upon CT characteristics, ambient conditions, alternate methods of operation, and evaporative cooling. The permittee shall provide manufacturer's performance curves (or equations) that correct for site conditions to the Permitting and Compliance Authorities within 45 days of completing the initial compliance testing. Operating data may be adjusted for the appropriate site conditions in accordance with the performance curves and/or equations on file with the Department. [Rule 62-210.200(Definitions - PTE), F.A.C.]

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

13. Permitted Capacity - Duct Burners: The total nominal heat input rate to the duct burners (DBs) located within each HRSG is 500 MMBtu per hour based on the higher heating value (HHV) of natural gas. Only natural gas shall be fired in the duct burners. [Rule 62-210.200(Definitions - PTE), F.A.C.]

~~14. Temporary Simple Cycle Operation of Two CTs Prior to Permanent Shutdown of Units 1, 2 and 3: The permittee may select any two of the five new CTs to be operated as simple cycle units prior to shutdown of Units 1, 2 and 3. The restrictions included in this condition apply only to those CTs chosen, and only during the described period. Once selected, only those CTs chosen may be operated prior to shutdown of Units 1, 2 and 3 in accordance with the following restrictions:~~

~~a. Restriction on SC Operation:~~

- ~~• The combined operation of the two CTs shall not exceed 1,100 hours.~~
- ~~• A NO_x CEMS shall be installed and operating in each stack prior to startup of the CTs in order to collect and record data for the purpose of demonstrating compliance with this requirement. Notwithstanding the relative accuracy test audit (RATA) grace period described in 40 CFR 75 Appendix B, the NO_x CEMS shall be fully certified in accordance with the requirements of 40 CFR 75 (including a RATA), within 30 operating days but not later than 60 calendar days after startup of the CTs.~~
- ~~• Total emissions of NO_x from the two CTs shall not exceed 39 tons during all operation including startups, shutdowns and malfunctions as measured and recorded by the required NO_x continuous emissions monitoring systems (CEMS) during the temporary period. Data recorded before and after CEMS certification shall be included in the calculation.~~
- ~~• Each CT shall be stack tested to demonstrate initial compliance with the applicable Subpart KKKK NO_x emission standard for each fuel to be fired. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup of each unit. Data collected during the above described RATA may be used to satisfy this 60 day test requirement provided all requirements of 48 CFR 60.8 and Subpart KKKK are met.~~
- ~~• The BACT emissions standards of specific condition 18 do not apply to these CTs prior to Unit 1, 2 and 3 shutdown. Following shutdown of Units 1, 2 and 3 all restrictions of this permit apply, including the BACT limits of specific condition 18.~~

~~b. Restriction on CC Operation: No combined cycle operation of any unit is allowed prior to permanent shutdown of Units 1, 2, and 3.~~

~~c. Monthly Operations Summary: By the 10th calendar day of each month, the permittee shall record the following in a written or electronic log for each CT for the previous month of operation: fuel consumption, hours of operation, NO_x emissions in total tons for the month, and NO_x emissions in total tons for the described restricted period of operation. Information recorded and stored as an electronic file shall be available for inspection and printing within at least three days of a request by the Department. The fuel consumption shall be monitored in accordance with the provisions of 40 CFR 75 Appendix D.~~

~~*[Permitting note: The limitation on total NO_x emissions and adherence to the emissions standards in Specific Conditions 18, 19 and 20 along with the compliance and recordkeeping requirements of this condition will effectively ensure that emissions increases of all PSD pollutants from the selected CTs operated in SC mode prior to Unit 1, 2 and 3 shutdown will be less than their respective Significant Emissions Rates per Rule 62-210.200 (Definitions - SER), F.A.C.]*~~

~~*[Rules 62-4.070(3), 62-210.200(PTE) and 62-212.400(12)(PSD Avoidance), F.A.C.; 40 CFR 60.8, and 40 CFR Subpart KKKK]*~~

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

14. Restricted Operation: The permittee shall not exceed the following parameters following shutdown of Units 1, 2 and 3:

- a. The hours of operation of the CTs are not limited (8,760 hours per year).
- b. Distillate oil firing is limited to ~~1,000 hours per CT (i.e. 5,000 hours total aggregate for all five CTs)~~ (based on an average of 1,000 hours per CT) during any consecutive 12-month period.
- c. Operation of the DBs is limited to ~~2,434 hours per DB (i.e. 9,736 hours aggregate for four DBs)~~ (based on an average of 2,434 hours per DB) during any consecutive 12-month period.
- d. Power (steam) augmentation shall be limited to ~~6,752 hours aggregate for four CTs (based on an average of 1,688 hours per CT)~~ during any consecutive 12-month period.
- e. Other than startup, shutdown, fuel switching or documented malfunction the CTs shall operate above 70% load during simple cycle operation, or the lowest minimum load where compliance is demonstrated during initial compliance testing.

15. Methods of Operation: Subject to the restrictions and requirements of this permit, the CTs may be commercially available for dispatch operate under the following methods of operation after shutdown of Units 1, 2 and 3

- a. *Simple Cycle (SC) Operation*: All five CTs may operate in simple cycle (SC) mode whereby the turbine exhaust gas (TEG) exits through or is diverted to a stack unassociated with a DB-fired HRSG. This method of operation will be an infrequent occurrence for the four CTs that will typically operate in combined cycle mode as described.
- b. *Combined Cycle (CC) Operation*: The four CTs associated with combined cycle Unit 4 may operate in combined cycle (CC) mode whereby the TEG is exhausted to their respective duct-fired HRSGs for energy recovery in order to raise steam to drive the single steam turbine-electrical generator (STG) subject to the restrictions of this permit.
- c. *Inlet Conditioning*: In accordance with the manufacturer's recommendations and appropriate ambient conditions, the evaporative cooling systems may be operated to reduce the compressor inlet air temperature and provide additional direct, shaft-driven electrical power.
- d. *Duct Firing*: The DB within each HRSG may be fired with natural gas to reheat the TEG in order to provide additional steam to the STG or the CTs for power augmentation.
- e. *Power augmentation*: Power (Steam) Augmentation (PA): Steam for PA is taken from the HRSG and is introduced into the CT compressor discharge, thus increasing the power produced by the expander portion of the turbine.

[Application; Rules 62-210.200(PTE) and 62-212.400(BACT), F.A.C.]

EMISSIONS STANDARDS

16. New Source Performance Standards for NO_x: Emissions of NO_x shall not exceed the following emission limits for each CT or CT/DB-fired HRSG determined pursuant to 40 CFR 60, Subpart KKKK.

Pollutant	Fuel	Method of Operation ^a	CEMS ^b Rolling Average ppmvd (uncorrected)
NO _x ^c	Oil	CT (SC)	42 on 4-hour basis
		CT (CC)	42 on 30-operating days basis
	Gas	CT (SC)	15 on 4-hour basis
		CT (CC)	15 on 30-operating days basis

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

		CT & DB	
--	--	---------	--

- a. CT (SC) means operation of CT in simple cycle mode. CT_(CC) means operation of CT in combined cycle without use of the DB. CT & DB means operation in combined cycle mode and using the DB.
- b. A CEMS for NO_x shall be installed on the CT stacks and on the HRSG stacks. Correction to 15% O₂ is **required, not allowed** consistent with the provisions of 40 CFR 60, Subpart KKKK.
- c. Compliance with the continuous NO_x standards shall be demonstrated based on data collected by the required CEMS.

Refer to Appendix KKKK of this permit for the full NSPS requirements. [40 CFR 60, Subpart KKKK]

17. **Best Available Control Technology (BACT) Emissions Standards for CO and VOC:** Emissions of VOC and CO shall not exceed the following emission limits for each CT or CT/DB-fired HRSG.

Pollutant	Fuel	Method of Operation ^a	Stack Test, 3-Run Average		CEMS ^c Block Average
			ppmvd @ 15% O ₂	lb/hr ^b	ppmvd @ 15% O ₂
<i>Unit 4 HRSG Stacks</i>					
CO	Oil	CT	8.0	40.4	8.0, 24-hr ^{d,f} 6, 12-month ^f
	Gas	CT	4.1	20.8	
		CT & DB	7.6	38.3	
VOC ^{e,g}	Oil	CT	2.8	7.6	Not Applicable
	Gas	CT	1.2	3.0	
		CT & DB	1.5	3.8	
<i>Unit 5 CT and Unit 4 Bypass Stacks</i>					
CO	Oil	CT	8.0	40.4	Not Applicable
	Gas	CT	4.1	20.8	
VOC ^e	Oil	CT	2.8	7.6	Not Applicable
	Gas	CT	1.2	3.0	

- a. CT means operation of a combustion turbine (CT) in simple cycle or in combined cycle without use of the duct burner (DB). CT & DB means operation in combined cycle mode and using the DB.
- b. The mass emission rate standards are based on a turbine inlet condition of 59° F and may be adjusted to actual test conditions in accordance with the performance curves and/or equations on file with the Department.
- c. CEMS for CO are required only on the HRSG stacks. Other than startup, shutdown, fuel switching or documented malfunction the CT shall operate above 70% **load, or the lowest load at which compliance is demonstrated during initial testing, load** during simple cycle operation.
- d. Compliance with the continuous 24-hour CO standards shall be demonstrated based on data collected by the required CEMS on the HRSG stacks. The initial and annual EPA Method 10 tests associated with the certification of the CEMS instruments may also be used to demonstrate compliance with the individual standards for natural gas, fuel oil, or duct burner modes. Separate CO tests shall be conducted under simple cycle mode on the CT stacks.
- e. Compliance with the VOC standards shall be demonstrated by conducting tests in accordance with EPA Method 25A on the HRSG stacks and, under simple cycle mode, on the CT stacks. Optionally, EPA Method 18 may also be performed to deduct emissions of methane and ethane. The emission standards are based on VOC measured as methane.

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

f. **Rolling Averages.** Enforcement discretion may be exercised for up to 12 months with respect to the **8 ppmvd and the 6 ppmvd @15% O₂ limits** for any CT/Duct-fired HRSG upon notification by the permittee of intent to install oxidation catalyst. The permittee shall have 12 months to complete the oxidation catalyst installation. From time of notification to installation of the catalyst all partial or complete calendar months shall be excluded from the 12-month rolling average.

g. Compliance with the CO CEMS based limits shall be deemed as compliance with the VOC limit.

[Rule 62-210.200(Definitions – BACT) and 62-212.400 F.A.C.]

~~19.~~18. **New Source Performance Standard for SO₂:** Pursuant to §60.4330(a)(2), SO₂ emissions are limited in NSPS Subpart KKKK by a prohibition on the firing of any fuels that contain total potential sulfur emissions in excess of 0.060 lb SO₂/MMBtu heat input. **Meeting the fuel sulfur limits in Condition 19.a of this permit will serve to demonstrate compliance with the Subpart KKKK standard for SO₂.** Refer to Appendix KKKK of this permit for the full NSPS requirements. [40 CFR 60, Subpart KKKK]

~~20.~~19. **Measures to Limit Particulate Emissions (PM/PM₁₀/Fine Particulate Matter):** The following measures and limitations, in conjunction with decreases from other units, effectively limit combined annual PM/PM₁₀ emissions to a level that ensures net emissions increases are well below the significant emission rate at which PSD applies and a subsequent BACT determination is required. These measures also minimize fine particulate emissions and formation:

a. **Fuel Sulfur Limits:** The sulfur concentration shall be limited to 2 grains per 100 standard cubic feet of natural gas. The sulfur concentration in the distillate fuel oil used shall be limited to 0.05 percent. Compliance with the fuel specifications shall be demonstrated by keeping records of the fuel sulfur content.

b. **Visible Emissions:** Visible emissions shall not exceed 10 percent opacity for each 6-minute block average. Compliance with the visible emissions standard shall be demonstrated by conducting tests in accordance with EPA Method 9. ~~23~~

c. **Ammonia Emissions (Slip) Limits:** Ammonia emissions shall be limited to 5 ppmvd @15% O₂. Compliance with the ammonia slip standard shall be demonstrated by conducting tests in accordance with EPA Methods TM-027 or 320.

[62-212.400(12)(PSD Avoidance)]

EXCESS EMISSIONS

[Permitting Note: The following conditions apply only to the SIP-based emissions standards specified in Condition No. 18 of this section. Rule 62-210.700, F.A.C. (Excess Emissions) cannot vary or supersede any federal provision of the NSPS or Acid Rain programs.]

~~21.~~20. **Operating Procedures:** The Best Available Control Technology (BACT) determinations established by this permit rely on “good operating practices” to reduce emissions. Therefore, all operators and supervisors shall be properly trained to operate and maintain the CTs, HRSGs, and pollution control systems in accordance with the guidelines and procedures established by each manufacturer. The training shall include good operating practices as well as methods of minimizing excess emissions.

[Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

~~22.~~21. **Alternate Visible Emissions Standard:** Visible emissions due to startups, shutdowns, and malfunctions shall not exceed 10% opacity except for up to ten, 6-minute averaging periods during a calendar day, which shall not exceed 20% opacity. [Rule 62-212.400(BACT), F.A.C.]

~~23.~~22. **Definitions**

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

- a. *Startup* is defined as the commencement of operation of any emissions unit which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which result in excess emissions. [Rule 62-210.200(245), F.A.C.]
- b. *Shutdown* is the cessation of the operation of an emissions unit for any purpose. [Rule 62-210.200(230), F.A.C.]
- c. *Malfunction* is defined as any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner. [Rule 62-210.200(159), F.A.C.]

24-23. 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. All such preventable emissions shall be included in any compliance determinations based on CEMS data. [Rule 62-210.700(4), F.A.C.]

25-24. Allowable Data Exclusions: As per the procedures in this condition, limited amounts of CO CEMS emissions data may be excluded from the corresponding SIP-based compliance demonstration, provided that best operational practices to minimize emissions are adhered to and the duration of data excluded is minimized. As provided by the authority in Rule 62-210.700(5), F.A.C., these conditions replace the provisions in Rule 62-210.700(1), F.A.C. For each CT/HRSG system, excess emissions resulting from startup, shutdown, and documented malfunctions shall not exceed two hours in any 24-hour period except for the specific cases listed below. 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.

- a. *Steam Turbine/HRSG System Cold Startup:* For cold startup of the steam turbine system, up to 8 hours of excess emissions from any CT/HRSG system may be excluded in any 24-hour period. A cold "startup of the steam turbine system" is defined as startup of the 4-on-1 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 CT/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. *Shutdown Combined Cycle Operation:* For shutdown of the combined cycle operation, up to 3 hours in any 24-hour period of excess emissions from any CT/HRSG system can be excluded.
- c. *CT/HRSG System Cold Startup:* For cold startup of a CT/HRSG system, up to 4 hours in any 24-hour period can be excluded. "Cold startup of a CT/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. *Simple Cycle CT Startup:* For startup of a CT for the purpose of operation in simple cycle mode, up to 1 hour in any 24-hour period of excess emissions can be excluded.~~

- e-d. *Fuel Switching:* For fuel switching, up to 2 hours in a 24-hour period can be excluded.

26-25. DLN Tuning: CEMS data collected during initial or other major DLN tuning sessions shall be excluded from the CEMS compliance demonstration provided the tuning session is performed in accordance with the manufacturer's specifications. A "major tuning session" would occur after completion of initial construction, a combustor change-out, a major repair or maintenance to a combustor, or other similar circumstances. Prior to performing any major tuning session, the permittee shall provide the Compliance Authority with an advance notice of at least 7 days that details the activity and proposed tuning schedule. The notice may be by telephone, facsimile transmittal, or electronic mail.

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

EMISSIONS PERFORMANCE TESTING

27.26. Test Methods: Any required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
CTM-027 320	Procedure for Collection and Analysis of Ammonia in Stationary Source. {Notes: This is an EPA conditional test method.} The minimum detection limit shall be 1 ppm. Measurement of Vapor Phase Organic and Inorganic Emissions by Extractive Fourier Transform Infrared (FTIR) Spectroscopy
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources {Notes: The method shall be based on a continuous sampling train.}
18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography {Note: EPA Method 18 may be used (optional) concurrently with EPA Method 25A to deduct emissions of methane and ethane from the measured VOC emissions.}
20	Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines
25A	Determination of Volatile Organic Concentrations

No other methods may be used unless prior written approval is received from the Department.
[Rules 62-204.800, F.A.C.; 40 CFR 60, Appendix A]

28.27. Initial Compliance Determinations: Each CT shall be stack tested to demonstrate initial compliance with the emission standards for CO, NO_x, VOC, visible emissions, and ammonia slip. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup of each unit configuration. Each unit shall be tested when firing natural gas, when using the duct burners and when firing distillate fuel oil. Reference method data collected during the required Relative Accuracy Test Audits (RATAs) may be used to demonstrate compliance with the initial CO and NO_x compliance tests. With appropriate flow measurements (or fuel measurements and approved F-factors), CEMS data may be used to demonstrate compliance with the CO mass rate emissions standards. CO and NO_x emissions recorded by the CEMS shall also be reported for each run during tests for visible emissions, VOC and ammonia slip. The Department may require the permittee to conduct additional tests after major replacement or major repair of any air pollution control equipment, such as the SCR catalyst, oxidation catalyst, DLN combustors, etc. [Rule 62-297.310(7)(a)1, F.A.C. and 40 CFR 60.8]

29.28. Continuous Compliance: The permittee shall demonstrate continuous compliance with the 24-hour and 12-month CO emission standards, and the NO_x emissions standards based on data collected by the certified CEMS. Within 45 days of conducting any RATA on a CEMS, the permittee shall submit a report to the Compliance Authority summarizing results of the RATA. Compliance with the CO emission standards also serves as an indicator of efficient fuel combustion and oxidation catalyst operation, which reduces emissions of particulate matter and volatile organic compounds. [Rule 62-212.400 (BACT), F.A.C.]

30.29. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), each CT shall be tested to demonstrate compliance with the emission standards for visible emissions. CO emissions data collected during the required continuous monitor Relative Accuracy Test Audits (RATAs) may be used to demonstrate compliance with the CO standards. Annual testing to determine the ammonia slip shall be

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

conducted while firing the primary fuel. NO_x emissions recorded by the CEMS shall be reported for each ammonia slip test run.

[Permitting Note: After initial compliance with the VOC standards is demonstrated, annual compliance tests for VOC emissions are not required. Compliance with the continuously monitored CO standards shall indicate efficient combustion and low VOC emissions. The Department retains the right to require VOC testing for the reasons such as exceedance of the CO limit or those given in Appendix SC, Special Compliance Tests.]

[Rules 62-212.400, 62-210.200 (243) (BACT), 62-4.070 (3) and 62-297.310(7)(a)4, F.A.C.]

CONTINUOUS MONITORING REQUIREMENTS

~~34-30.~~ CEM Systems: The permittee shall install, calibrate, maintain, and operate continuous emission monitoring systems (CEMS) to measure and record the emissions of CO from the HRSG stacks and NO_x from all stacks in a manner sufficient to demonstrate continuous compliance with the CEMS emission standards of this section. Each monitoring system shall be installed, calibrated, and properly functioning prior to the initial performance tests. Within one working day of discovering emissions in excess of a CO or NO_x standard (and subject to the specified averaging period), the permittee shall notify the Compliance Authority.

a. *CO Monitors.* The CO monitors shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4 ~~and/or~~ 4A within 60 calendar days of achieving permitted capacity as defined in Rule 62-297.310(2), F.A.C., but no later than 180 calendar days after initial startup. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F, and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Compliance Authority. The RATA tests required for the CO monitor shall be performed using EPA Method 10 in Appendix A of 40 CFR 60, ~~and shall be based on a continuous sampling train.~~ The CO monitor span values shall be set appropriately considering the allowable methods of operation and corresponding emission standards.

b. *NO_x Monitors.* Each NO_x monitor shall be certified, operated, and maintained in accordance with the requirements of 40 CFR 75. Record keeping and reporting shall be conducted pursuant to Subparts F and G in 40 CFR 75. The RATA tests required for the NO_x monitor shall be performed using EPA Method ~~20 or~~ 7E in Appendix A of 40 CFR 60.

c. *Diluent Monitors.* The oxygen (O₂) or carbon dioxide (CO₂) content of the flue gas shall be monitored at the locations where ~~NO_x and CO are~~ monitored to correct the measured emissions rates to 15% oxygen. If a CO₂ monitor is installed, the oxygen content of the flue gas shall be calculated using F-factors that are appropriate for the fuel fired. Each monitor shall comply with the performance and quality assurance requirements of 40 CFR 75.

~~32-31.~~ CEM Data Requirements:

- *Data Collection:* Emissions shall be monitored and recorded at all times including startup, operation, shutdown, and malfunction except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments. The CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over an hour. If the CEMS measures concentration on a wet basis, the CEM system shall include provisions to determine the moisture content of the exhaust gas and an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Alternatively, the owner or operator may develop through manual stack test measurements a curve of moisture contents in the exhaust gas versus load for each allowable fuel, and use these typical values in an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Final results of the CEMS shall be expressed as ppmvd of ~~NO_x and CO corrected to 15% oxygen, and as ppmvd of NO_x (uncorrected).~~ The CEMS shall be used to demonstrate compliance with the CEMS emission standards

Heron, Teresa

From: Linero, Alvaro
Sent: Tuesday, September 02, 2008 11:51 AM
To: 'Bradley, Chris'; Heron, Teresa
Subject: RE: Bartow Repower Permit Revision Testing Questions

Chris.

The draft is under review.

Feel free to call.

Al Linero.

From: Linero, Alvaro
Sent: Monday, August 25, 2008 4:08 PM
To: 'Bradley, Chris'; Heron, Teresa
Subject: RE: Bartow Repower Permit Revision Testing Questions

Chris.

I'm going to try to understand all this, but I don't anticipate any reset of the clock.

Teresa and I are working on this modification right now.

By the way, I said hi to Dave Meyer, Mike Kennedy and Brenda Brickhouse here on other business.

Al Linero.

From: Bradley, Chris [mailto:Chris.Bradley@pgnmail.com]
Sent: Monday, August 25, 2008 3:27 PM
To: Heron, Teresa
Cc: Linero, Alvaro
Subject: Bartow Repower Permit Revision Testing Questions
Importance: High

Ms. Heron:

As the final stages of planning are being completed for initial testing of the combustion turbines in simple-cycle and combined cycle modes at the Bartow Repower Project, it has become increasingly apparent that the schedule and logistics for testing is becoming very complex. With that in mind Progress Energy would like to propose clarifications/changes to the language we proposed in the initial AC permit modification application. The changes in language would provide some welcomed flexibility in performing compliance testing by allowing the facility to postpone testing in the mode defined as "less than 70% load in the simple cycle (SC) operation" if the testing schedule becomes too tight. The new language would remove any

9/2/2008

ambiguity regarding the time period for testing at 70% load in the SC mode and the facility would still be limited to the operating at a load greater than 70% with the exclusion for start-up, shut-down, fuel-switching or documented malfunction. The facility would then perform compliance testing at less than 70% load at some later date if it is deemed necessary to operate at that load level in the SC mode. In addition, Progress Energy is requesting that each of the conditions be changed so that they are identically phrased.

Specifically,

New Condition No 14.e – The language as currently proposed includes - Other than startup, shutdown, fuel switching or documented malfunction the CT shall operate above 70% load during simple cycle operation, or the lowest minimum load where compliance is demonstrated during initial compliance testing.”

Progress Energy is requesting the following change to the initial proposed new language. – “Other than startup, shutdown, fuel switching or documented malfunction the CT shall operate above 70% load during simple cycle operation, or the lowest minimum load at which where compliance is demonstrated during initial or future compliance testing.”

Condition No 17.c - The language as currently proposed includes – “Other than startup, shutdown, fuel switching or documented malfunction the CT shall operate above 70% load, or the lowest load at which compliance is demonstrated during initial testing during simple-cycle operation.”

Progress Energy is requesting the following change to the initial proposed new language. – “Other than startup, shutdown, fuel switching or documented malfunction the CT shall operate above 70% load during simple-cycle operation, or the lowest load at which compliance is demonstrated during initial or future compliance testing ~~during simple-cycle operation.~~”

If you have any questions, please contact me. In addition, if the clarifications requested in this e-mail will “reset the permitting clock”, please call me to discuss. If this request for clarification of the existing permit conditions will delay the issuance of the revised permit, Progress Energy may opt to withdraw this request.

Best regards,

Chris Bradley
Sr. Environmental Specialist
Technical Services/EHSS Section-POG
Progress Energy Florida, Inc.
Telephone: 727.820.5962
Vnet No: 230.5962
Cell: 727.409.2477
Fax: 727.820.5229
E-mail: Chris.Bradley@pgnmail.com

9/2/2008

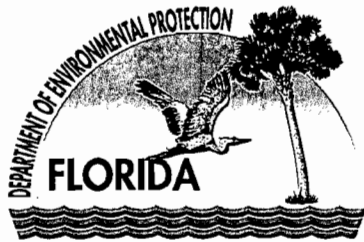
Walker, Elizabeth (AIR)

From: Walker, Elizabeth (AIR)
Sent: Monday, May 12, 2008 5:27 PM
To: 'Forney.Kathleen@epamail.epa.gov'
Cc: 'Robbins, Gary W'; Heron, Teresa
Subject: Florida Power Corporation, Bartow Plant PSD-FL-381A (1030011-012-AC)

On May 6, 2008 We received an application for Florida Power Corporation (dba Progress Energy Florida) Bartow Plant to modify PSD-FL-381. This is being tracked under PSD-FL-381A, and ARMS PA project 1030011-012-AC. The processor for this application is Teresa Heron. You may contact her at Teresa.Heron@dep.state.fl.us or 850/488-0114 if you have any questions.

Click on this link to the scanned PDF version of this application.
<http://arm-permit2k.dep.state.fl.us/psd/1030011/00002E55.pdf>

Elizabeth Walker
Bureau of Air Regulation
Division of Air Resource Management (DARM)
(850)921-9505



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blairstone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor
Jeff Kottkamp
Lt. Governor
Michael W. Sole
Secretary

May 29, 2008

Electronically Sent – Received Receipt Requested.

Thomas.lawery@pgnmail.com

Mr. Thomas Lawery, Plant Manager
Authorized Representative
Florida Power Corporation dba
Progress Energy Florida
1601 Weedon Island Drive
St. Petersburg, Florida 33711

Re: DEP File Nos. PSD-FL-381A and 1030011-012-AC
P.L. Bartow Power Plant Repowering Project
Request for Additional Information

Dear Mr. Lawery:

On May 6, 2008 we received your application for a modification of the air construction permit for the natural gas combined cycle repowering of the steam turbine-electrical generators (STGs) associated with existing fossil-fuel fired Units 1 and 2. In order to continue processing your application, the Department will need a rationale explanation of each requested permit modification. Should your response to any of the requests require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. Please note that per Rule 62-4.055(1): "The applicant shall have ninety days after the Department mails a timely request for additional information to submit that information to the Department..... Failure of an applicant to provide the timely requested information by the applicable date shall result in denial of the application."

If you have any questions regarding this matter, please contact Teresa Heron (review engineer) at 850/921-9529 or Debbie Nelson (meteorologist) at 850/921-8986.

Sincerely,

Syed Arif, P.E., Acting Program Administrator
Special Projects Section

SA/th

Cc: Chris.Bradley, PEF: chris.bradley@pgnmail.com
Scott Osbourn, P.E., Golder: sosbourn@golder.com
Gregg Worley, U.S. EPA Region 4, Atlanta GA: worley.gregg@epa.gov
Dee Morse, National Park Service, Denver CO: dee_morse@nps.gov
Mara Nasca, P.E., DEP/SWD: mara.nasca@dep.state.fl.us
Peter Hessling, PCDEM: phesslin@pinellascounty.org

Walker, Elizabeth (AIR)

From: Walker, Elizabeth (AIR)
Sent: Thursday, May 29, 2008 2:24 PM
To: 'thomas.lawery@pgnmail.com'
Cc: Arif, Syed; Heron, Teresa; 'Hessling, Peter A'; Nasca, Mara; 'dee_morse@nps.gov'; 'worley.gregg@epa.gov'; 'chris.bradley@pgnmail.com'; 'sosbourn@golder.com'
Subject: RAI - 1030011-012-AC/PSD-FL-381A (P.L. Bartow Power Plant Repowering Project)
Attachments: 1030011-012-AC.pdf

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.

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,

Elizabeth Walker
Bureau of Air Regulation
Division of Air Resource Management (DARM)
(850)921-9505

Tracking:

Recipient
✓ 'thomas.lawery@pgnmail.com'
✓ Arif, Syed
✓ Heron, Teresa
✓ 'Hessling, Peter A'
✓ Nasca, Mara
✓ dee_morse@nps.gov'
✓ worley.gregg@epa.gov'
✓ 'chris.bradley@pgnmail.com'
✓ 'sosbourn@golder.com'

Delivery
Delivered: 5/29/2008 2:24 PM
Delivered: 5/29/2008 2:24 PM
Delivered: 5/29/2008 2:24 PM

Walker, Elizabeth (AIR)

From: Mail Delivery System [MAILER-DAEMON@sophos.golder.com]
Sent: Thursday, May 29, 2008 2:24 PM
To: Walker, Elizabeth (AIR)
Subject: Successful Mail Delivery Report
Attachments: Delivery report; Message Headers

This is the mail system at host sophos.golder.com.

Your message was successfully delivered to the destination(s) listed below. If the message was delivered to mailbox you will receive no further notifications. Otherwise you may still receive notifications of mail delivery errors from other systems.

The mail system

<sosbourn@golder.com>: delivery via 127.0.0.1[127.0.0.1]:10025: 250 OK, sent
483EF4AC_25664_9_4 68E251093461

Walker, Elizabeth (AIR)

From: Mail Delivery System [MAILER-DAEMON@mseive02.rtp.epa.gov]
Sent: Thursday, May 29, 2008 2:24 PM
To: Walker, Elizabeth (AIR)
Subject: Successful Mail Delivery Report
Attachments: Delivery report; Message Headers

This is the mail system at host mseive02.rtp.epa.gov.

Your message was successfully delivered to the destination(s) listed below. If the message was delivered to mailbox you will receive no further notifications. Otherwise you may still receive notifications of mail delivery errors from other systems.

The mail system

<worley.gregg@epa.gov>: delivery via 127.0.0.1[127.0.0.1]:10025: 250 OK, sent
483EF4AE_23781_952_12 8E65E1DC01D

Walker, Elizabeth (AIR)

From: Lawery, Thomas D [Thomas.Lawery@pgnmail.com]
To: Walker, Elizabeth (AIR)
Sent: Thursday, May 29, 2008 2:24 PM
Subject: Read: RAI - 1030011-012-AC/PSD-FL-381A (P.L. Bartow Power Plant Repowering Project)

Your message

To: Thomas.Lawery@pgnmail.com
Subject:

was read on 5/29/2008 2:24 PM.

Walker, Elizabeth (AIR)

From: Exchange Administrator
Sent: Thursday, May 29, 2008 2:24 PM
To: Walker, Elizabeth (AIR)
Subject: Delivery Status Notification (Relay)
Attachments: ATT222407.txt; RAI - 1030011-012-AC/PSD-FL-381A (P.L. Bartow Power Plant Repowering Project)

This is an automatically generated Delivery Status Notification.

Your message has been successfully relayed to the following recipients, but the requested delivery status notifications may not be generated by the destination.

[phesslin@co.pinellas.fl.us](mailto:p Hesslin@co.pinellas.fl.us)

Walker, Elizabeth (AIR)

From: Exchange Administrator
Sent: Thursday, May 29, 2008 2:24 PM
To: Walker, Elizabeth (AIR)
Subject: Delivery Status Notification (Relay)
Attachments: ATT222385.txt; RAI - 1030011-012-AC/PSD-FL-381A (P.L. Bartow Power Plant Repowering Project)

This is an automatically generated Delivery Status Notification.

Your message has been successfully relayed to the following recipients, but the requested delivery status notifications may not be generated by the destination.

dee_morse@nps.gov

Walker, Elizabeth (AIR)

From: System Administrator
To: Nasca, Mara
Sent: Thursday, May 29, 2008 2:24 PM
Subject: Delivered:RAI - 1030011-012-AC/PSD-FL-381A (P.L. Bartow Power Plant Repowering Project)

Your message

To: 'thomas.lawery@pgnmail.com'
Cc: Arif, Syed; Heron, Teresa; 'Hessling, Peter A'; Nasca, Mara; 'dee_morse@nps.gov'; 'worley.gregg@epa.gov'; 'chris.bradley@pgnmail.com'; 'sosbourn@golder.com'
Subject: RAI - 1030011-012-AC/PSD-FL-381A (P.L. Bartow Power Plant Repowering Project)
Sent: 5/29/2008 2:24 PM

was delivered to the following recipient(s):

Nasca, Mara on 5/29/2008 2:24 PM

Walker, Elizabeth (AIR)

From: System Administrator
To: Arif, Syed
Sent: Thursday, May 29, 2008 2:24 PM
Subject: Delivered:RAI - 1030011-012-AC/PSD-FL-381A (P.L. Bartow Power Plant Repowering Project)

Your message

To: 'thomas.lawery@pgnmail.com'
Cc: Arif, Syed; Heron, Teresa; 'Hessling, Peter A'; Nasca, Mara; 'dee_morse@nps.gov'; 'worley.gregg@epa.gov'; 'chris.bradley@pgnmail.com'; 'sosbourn@golder.com'
Subject: RAI - 1030011-012-AC/PSD-FL-381A (P.L. Bartow Power Plant Repowering Project)
Sent: 5/29/2008 2:24 PM

was delivered to the following recipient(s):

Arif, Syed on 5/29/2008 2:24 PM

Walker, Elizabeth (AIR)

From: System Administrator
To: Heron, Teresa
Sent: Thursday, May 29, 2008 2:24 PM
Subject: Delivered:RAI - 1030011-012-AC/PSD-FL-381A (P.L. Bartow Power Plant Repowering Project)

Your message

To: 'thomas.lawery@pgnmail.com'
Cc: Arif, Syed; Heron, Teresa; 'Hessling, Peter A'; Nasca, Mara; 'dee_morse@nps.gov'; 'worley.gregg@epa.gov'; 'chris.bradley@pgnmail.com'; 'sosbourn@golder.com'
Subject: RAI - 1030011-012-AC/PSD-FL-381A (P.L. Bartow Power Plant Repowering Project)
Sent: 5/29/2008 2:24 PM

was delivered to the following recipient(s):

Heron, Teresa on 5/29/2008 2:24 PM

Florida Department of
Environmental Protection

Memorandum

TO: Trina Vielhauer
THROUGH: Al Linero *aa*
FROM: Teresa Heron *T.H.*
DATE: September 2, 2008
SUBJECT: DEP File Nos. 1030011-012-AC (PSD-FL-381A)
P.L. Bartow Power Plant Repowering Project
Modification of Permit – Removal of Interim Operating Mode

This project is subject to minor source preconstruction review. It is actually a change to a project permitted (reference Permit Nos. 1030011-010-AC and PSD-FL-381) under the major source preconstruction review rules and still under construction. Attached for your review are the following items:

- Written Notice of Intent to Issue Air Permit Modification;
- Public Notice of Intent to Issue Air Permit Modification;
- Technical Evaluation and Preliminary Determination;
- Draft Permit (letter) Modification; and
- P.E. Certification.

On May 6, 2008, PEF submitted a permit modification application requesting changes to certain conditions including the removal of an interim operating mode applicable to the P.L. Bartow Power Plant Repowering Project. The key change is that they will not commercially operate the combined cycle units in simple cycle mode.

For reference, the repowering project will result in large reductions of all PSD pollutants with the exception of carbon monoxide, for which a BACT determination was conducted.

I recommend your approval of the attached Draft Permit package.

Attachments

PROFESSIONAL ENGINEER CERTIFICATION STATEMENT

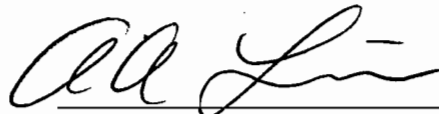
PERMITTEE

Florida Power Corporation dba
Progress Energy Florida, Inc.
1601 Weedon Island Drive
St. Petersburg, Florida 33711

DEP File No.: 1030011-012-AC (PSD-FL-381A)
Modification of Interim Operation Modes
Repowering Project
P.L. Bartow Power Plant
Pinellas County

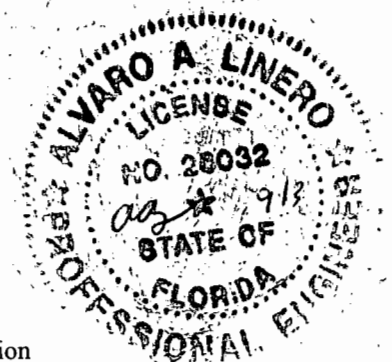
Project: The applicant proposes to modify certain specific conditions of a recently-issued PSD permit applicable to the P.L. Bartow Power Plant. The PSD permit [reference: DEP File No. 1030011-010-AC (PSD-FL-381)] authorized the replacement of the three residual fuel oil-fired steam electrical generators with a natural gas-fueled combined cycle unit and a natural gas-fueled simple cycle unit. The key modification to the PSD permit is the elimination of an interim period during which the four combustion turbines that comprise the combined cycle unit (presently under construction) can operate in simple cycle (higher emitting) mode.

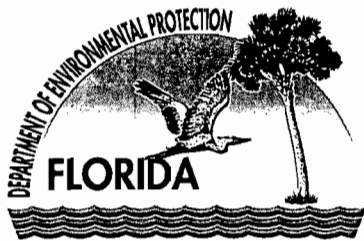
I HEREBY CERTIFY that the air pollution control engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 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, geological, and meteorological features).



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

9/3/08
(Date)





Florida Department of Environmental Protection

Bob Martinez Center
2600 Blairstone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor
Jeff Kottkamp
Lt. Governor
Michael W. Sole
Secretary

September 5, 2008

Electronically Sent – Received Receipt Requested.

Thomas.Lawery@pgnmail.com

Mr. Thomas Lawery, Plant Manager
Florida Power Corporation dba
Progress Energy Florida (PEF)
1601 Weedon Island Drive
St. Petersburg, Florida 33711

Re: DEP File Nos. 1030011-012-AC (PSD-FL-381A)
P.L. Bartow Power Plant Repowering Project
Modification of Permit – Removal of Interim Operating Mode

Dear Mr. Lawery:

On May 6, 2008, PEF submitted a permit modification application requesting changes to certain conditions to Permit No. 1030011-010-AC (PSD-FL-381) applicable to the P.L. Bartow Power Plant Repowering Project. The key modification to the PSD permit is the elimination of an interim period during which the four combustion turbines that comprise the combined cycle unit can operate in simple cycle mode. Enclosed are the following documents:

- Written Notice of Intent to Issue Air Permit Modification;
- Public Notice of Intent to Issue Air Permit Modification;
- Technical Evaluation and Preliminary Determination; and
- Draft Permit (letter) Modification.

The Public Notice of Intent to Issue Air Permit Modification 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.

If you have any questions, please contact the Project Engineer, Teresa Heron, at (850) 921-9529 or A. A. Linero, Program Administrator at (850) 921-9523.

Sincerely,

Trina L. Vielhauer, Chief
Bureau of Air Regulation

TLV/aal/th

Enclosures

WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT MODIFICATION

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

Florida Power Corporation dba
Progress Energy Florida, Inc.
1601 Weedon Island Drive
St. Petersburg, Florida 33711

Authorized Representative: Mr. Thomas Lawery

DEP File No.: 1030011-012-AC (PSD-FL-381A)
Modification of Interim Operation Modes
Repowering Project
P.L. Bartow Power Plant
Pinellas County

Facility Location: The applicant, Progress Energy Florida (PEF), operates the existing P.L. Bartow Power Plant, which is located at 1601 Weedon Island Drive in St. Petersburg, Pinellas County, Florida.

Project: The applicant proposes to modify certain specific conditions of a recently-issued prevention of significant deterioration (PSD) permit applicable to the P.L. Bartow Power Plant. The PSD permit [reference: DEP File No. 1030011-010-AC (PSD-FL-381)] authorized the replacement of three residual fuel oil-fired steam electrical generators with a natural gas-fueled combined cycle unit and a natural gas-fueled simple cycle unit. The key modification to the PSD permit is the elimination of an interim period during which the four combustion turbines that comprise the combined cycle unit can operate in simple cycle mode.

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 perform the proposed work. 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 address indicated above for the Permitting Authority. The complete project file includes the Draft Permit Modification, the applications, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address or phone number listed above. In addition, electronic copies of these documents are available by entering the file number provided above where indicated on the following web site:

<http://www.dep.state.fl.us/air/eproducts/apds/default.asp>

Notice of Intent to Issue Permit Modification: 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 the 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 comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT MODIFICATION

Public Notice: Pursuant to Section 403.815, F.S. and Rules 62-110.106 and 62-210.350, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Permit (Public Notice). The Public Notice shall be published one time only as soon as possible in the legal advertisement section of a newspaper of general circulation in the area affected by this project. The newspaper used must meet 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 Permitting Authority at above address or phone number. Pursuant to Rule 62-110.106(5) and (9), F.A.C., the applicant shall provide proof of publication to the Permitting Authority at the above address within 7 days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rule 62-110.106(11), F.A.C.

Comments: The Permitting Authority will accept written comments concerning the proposed Draft Permit for a period of 14 days from the date of publication of the Public Notice. Written comments must be received by the Permitting Authority by close of business (5:00 p.m.) on or before the end of this 14-day period. If written comments received result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, MS 35, Tallahassee, Florida 32399-3000. Petitions filed by the applicant or any of the parties listed below must be filed within 14 days of receipt of this Written Notice of Intent to Issue Air Permit. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of the attached Public Notice or within 14 days of receipt of this Written Notice of Intent to Issue Air Permit, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 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, F.A.C.

A petition that disputes the material facts on which the Permitting Authority'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 when and how each petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (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 specific rules or statutes; and, (g) A statement of the

WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT MODIFICATION

relief sought by the petitioner, stating precisely the action the 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 Permitting Authority'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, F.A.C.

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 Written 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 in this proceeding.

Executed in Tallahassee, Florida.



Trina L. Vielhauer, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Intent to Issue Air Permit package (including the Written Notice of Intent to Issue Air Permit Modification, the Public Notice of Intent to Issue Air Permit Modification, the Technical Evaluation and Preliminary Determination and the Draft Permit Modification) was sent by electronic mail with received receipt requested before the close of business on 9/8/08 to the persons listed below.

- Thomas Lawery: thomas.lawery@pgnmail.com
- Chris Bradley, PEF: chris.bradley@pgnmail.com
- Scott Osbourn, P.E., Golder: sosbourn@golder.com
- Dee Morse, NPS: dee_morse@nps.gov
- Meredith Bond, U.S. FWS: meredith_bond@fws.gov
- Kathleen Forney: forney.kathleen@epa.gov
- Mara Nasca, DEPSWD: mara.nasca@dep.state.fl.us
- Mayor, City of St. Petersburg: mayor@stpete.org
- Administrator, Pinellas County: sspratt@pinellascounty.org
- Peter Hessling, PCDEM: phesslin@pinellascounty.org

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)

9/8/08
(Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT MODIFICATION

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DEP File No. 1030011-012-AC (PSD-FL-381A)
Florida Power Corporation dba Progress Energy Florida, Inc.
P.L. Bartow Power Plant Repowering Project
Pinellas County

Applicant: The applicant for this project is Florida Power Corporation dba Progress Energy of Florida (PEF), Inc. The applicant's authorized representative and mailing address is: Mr. Thomas Lawery, Plant Manager, P.L. Bartow Power Plant, 1601 Weedon Island Drive in St. Petersburg, Pinellas County, Florida.

Facility and Location: PEF operates the existing P.L. Bartow Power Plant, which is located in Pinellas County at 1601 Weedon Island Drive, St. Petersburg. The plant is located approximately 83 kilometers south of the Prevention of Significant Deterioration (PSD) Class I Chassahowitzka Wilderness Area. The facility UTM coordinates are Zone 17, 342.4 km East and 3,082.6 km North. The existing facility consists of three residual fuel oil-fired steam electrical generators, four simple cycle combustion turbines, a pipeline heating boiler and relocatable diesel generators.

Project: The applicant proposes to modify certain specific conditions of a recently-issued PSD permit applicable to the P.L. Bartow Power Plant. The PSD permit [reference: DEP File No. 1030011-010-AC (PSD-FL-381)] authorized the replacement of the three residual fuel oil-fired steam electrical generators with a natural gas-fueled combined cycle unit and a natural gas-fueled simple cycle unit. The key modification to the PSD permit is the elimination of an interim period during which the four combustion turbines that comprise the combined cycle unit (presently under construction) can operate in simple cycle (higher emitting) mode. Other changes include additional time to comply with the best available control technology (BACT) for carbon monoxide emissions. This project does not trigger PSD.

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 modification is required to perform the proposed work. 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 address indicated above for the Permitting Authority. The complete project file includes the Draft Permit Modification, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address or phone number listed above. In addition, electronic copies of these documents are available by entering the file number provided above where indicated on the following web site:

<http://www.dep.state.fl.us/air/eproducts/apds/default.asp>

Notice of Intent to Issue Permit Modification: The Permitting Authority gives notice of its intent to issue an air permit modification (permit) to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the 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 comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Comments: The Permitting Authority will accept written comments concerning the proposed Draft Permit for a period of 14 days from the date of publication of the Public Notice. Written comments must be received by the Permitting Authority by close of business (5:00 p.m.) on or before the end of this 14-day period. If written comments received result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within 14 days of publication of this Public Notice or receipt of a written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 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, F.A.C.

A petition that disputes the material facts on which the Permitting Authority'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 when and how each petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (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 specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the 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 Permitting Authority'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, F.A.C.

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. 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 in this proceeding.

TECHNICAL EVALUATION
AND
PRELIMINARY DETERMINATION

Florida Power Corporation dba
Progress Energy Florida
P. L. Bartow Power Plant Repowering Project

Modification of Interim Operating Modes

Pinellas County

DEP File No. 1030011-012-AC (PSD-FL-381A)
Modification of Permit No. 1030011-010-AC (PSD-FL-381)



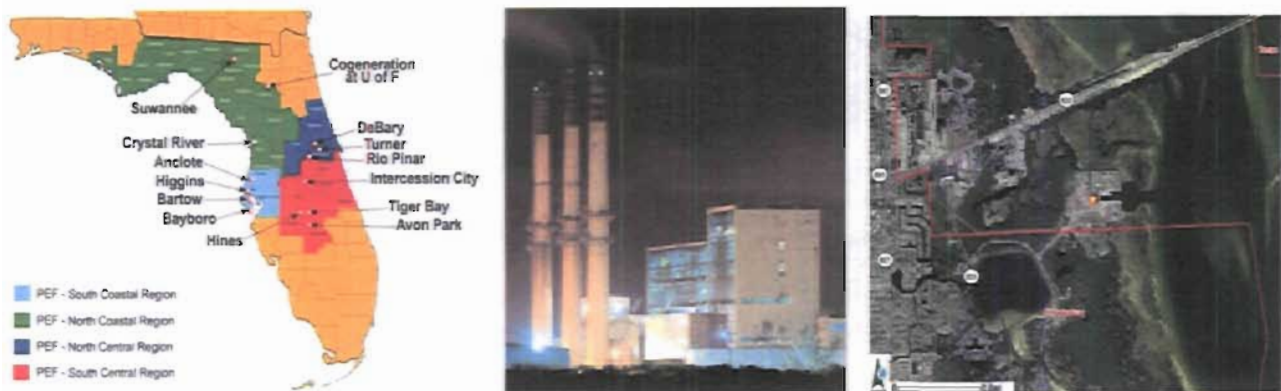
Florida Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation
Special Projects Section

September 5, 2008

Facility Description and Location

The Progress Energy Florida (PEF) P.L. Bartow Plant consists of three residual oil-fueled steam generating units that produce 120, 120 and 225 megawatts (MW) of electrical power and four oil-fueled simple cycle units each of which has a nominal capacity of 56 MW. A nominal 1,475 MW natural gas-fueled repowering project is under construction and is conditioned upon the shut down of the three residual oil-fueled units.

The P.L. Bartow Power Plant is located in Pinellas County, on Weedon Island on the east side of St. Petersburg. The site is located approximately 83 kilometers (km) south from the Chassahowitzka National Wildlife Area; the nearest Federal Prevention of Significant Deterioration (PSD) Class I Area. The facility UTM coordinates are Zone 17, 342.4 km East and 3,082.6 km North. The location of the P.L. Bartow Power Plant is shown below.



Location of the P.L. Bartow Plant. Residual oil-fueled units. Aerial view of Weedon Island.

Facility Regulatory Categories

Title III: According to the present Title V operation permit, the existing facility is identified as a major source of hazardous air pollutants (HAP).

Title IV: The existing facility has units subject to the acid rain provisions of the Clean Air Act.

Title V: The existing facility is a Title V major source of air pollution in accordance with Chapter 213, Florida Administrative Code (F.A.C.)

PSD: The existing facility is a PSD-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

Project Description and Analysis

PEF submitted an application for a modification of Permit No. 1030011-010-AC (PSD-FL-381). The permit authorized the construction of one nominal 1,280 MW natural gas-fueled combined cycle unit (Unit 4) and one nominal 195 MW natural gas-fueled simple cycle unit (Unit 5). The same permit required the shut down of the three existing residual oil-fueled steam generators designated as Units 1, 2 and 3. The affected permit and supporting documents are at the following link:

www.dep.state.fl.us/Air/permitting/construction/bartow.htm

The key requested modification is removal of a condition that authorized use of two combustion turbines (CT) in simple cycle mode for a seven month period (approximately December 2008 to June 2009) prior to the permanent shut down of Units 1, 2 and 3.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Other changes relate primarily to implementation of the best available control technology (BACT) determination for carbon monoxide (CO) as discussed below and clarification of permit language and terms. Because the described use of two CT would have occurred prior to the shut down of Units 1, 2 and 3 it was not possible for PEF to take “credit” for contemporaneous emissions reductions when calculating net emissions increases. Rather than making permanent and enforceable emissions reductions from Units 1, 2 and 3 applicable for a short period prior to their shut down, a condition was included to insure that emissions from the initial simple cycle phase will not exceed the respective significant emission rate (SER) for any PSD pollutant. The rationale is discussed in pages 9 and 10 of the technical evaluation document available at the following link:

www.dep.state.fl.us/Air/permitting/construction/pinellas-bartow/TECHNICAL381.pdf

The applicant’s summary of net emissions increases and PSD applicability for the operation of two CT in simple cycle mode for seven months in tons per year (TPY) is given below:

Pollutant	Emissions from Two Simple Cycle CT (tons)	PSD SER in TPY	PSD?
Sulfur Dioxide (SO ₂)	<< 39	40	No
Particulate Matter (PM/PM ₁₀)	< 24/14	25/15	No
Nitrogen Oxides (NO _x)	39	40	No
Carbon Monoxide (CO)	< 99	100	No
Volatile Organic Compounds (VOC)	<< 39	40	No
Sulfuric Acid Mist (SAM)	<< 6	7	No
Lead (Pb)	<< 0.6	0.6	No

The removal of authority to operate prior to shut down of Units 1, 2 and 3 removes a higher emitting simple cycle mode for the CT that will be incorporated into combined cycle Unit 4. It makes the associated restrictions moot and does not affect the PSD review or the BACT determination conducted for the repowering project. In the long run, the benefits of the repowering (without the temporary simple cycle mode described above) are very significant as measured by the reductions in key pollutants and as detailed in the following table:

Pollutants	Baseline Emissions Units 1,2, 3 in TPY	Future Emissions New Units in TPY	Net Increase (decrease) in TPY
PM/PM ₁₀	804/559	413/413	(391/146)
SAM	423	72	(351)
SO ₂	24,816	466	(24,350)
NO _x	4,043	3,191	(852)
VOC	57	145	88
CO	367	938	571

Proposed Changes to Permit No. 1030011-010-AC, Section III, Subsection A

Because the authority to operate two CT as described and the associated restrictions are in a federally enforceable permit, a permit modification is needed to remove the applicable requirements. Similarly the other requested changes require a permit modification. All of the requested changes are in Section III, Section A., Combined Cycle Unit 4 and Simple Cycle Unit 5.

Following are the proposed changes to the subject permit in strike through (~~strike through~~) and double underline format where applicable.

Emissions Unit Table

The title of the emissions unit table is modified to include Unit 5 consistent with the individual entry (row) that refers to Unit 5 [One 195 MW (ISO) Combustion Turbine]. The title of the table shall now read:

Emissions Units Comprising Combined Cycle Unit ~~4~~ and Simple Cycle Unit 5.

Condition 6. Dry Low NO_x (DLN) Combustion

The applicant requests removal of the requirement to simultaneously tune the DLN combustors for VOC emissions when tuning is conducted for NO_x and CO emissions.

The applicant's request is consistent with the corresponding condition included in the most recent permits issued for the Florida Municipal Power Agency (FMPA) project at Cane Island, the Orlando Utilities Commission (OUC) Stanton Unit B and the Florida Power and Light (FP&L) West County Energy Center.

The Department included the more comprehensive condition for the P. L. Bartow project because of the temporary simple cycle operation and requirement to avoid PSD during the interim operating mode. Since that condition will be removed as described below, there is less need to include VOC in the subject condition. The applicant will conduct an initial VOC compliance test and the Department agrees that demonstration of low CO (by high temperature combustion) will also insure low VOC during tuning and during continuous operation.

The relevant condition will be modified as follows:

6. DLN Combustion: The permittee shall install, operate and maintain Dry Low NO_x (DLN) systems to control NO_x emissions from each CT when firing natural gas. Prior to the initial emissions performance tests required for each CT, the DLN combustors and automated combustion turbine control system shall be tuned without a selective catalytic reduction (SCR) system in operation to achieve the permitted CO₂, ~~VOC~~ and NO_x levels for simple cycle operation. Thereafter, each system shall be maintained and tuned in accordance with the manufacturer's recommendations or industry standards.

Condition 14. Temporary Simple Cycle Operation Prior to Permanent Shutdown of Units 1, 2 and 3

The language will be struck in its entirety for the reasons described in the previous section.

14. Deleted in accordance with Permit Modification 1030011-012-AC.

~~Temporary Simple Cycle Operation of Two CTs Prior to Permanent Shutdown of Units 1, 2 and 3: The permittee may select any two of the five new CTs to be operated as simple cycle units prior to shutdown of Units 1, 2 and 3. The restrictions included in this condition apply only to~~

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

those CTs chosen, and only during the described period. Once selected, only those CTs chosen may be operated prior to shutdown of Units 1, 2 and 3 in accordance with the following restrictions:

a. ~~Restriction on SC Operation:~~

- ~~The combined operation of the two CTs shall not exceed 1,100 hours.~~
- ~~A NO_x CEMS shall be installed and operating in each stack prior to startup of the CTs in order to collect and record data for the purpose of demonstrating compliance with this requirement. Notwithstanding the relative accuracy test audit (RATA) grace period described in 40 CFR 75 Appendix B, the NO_x CEMS shall be fully certified in accordance with the requirements of 40 CFR 75 (including a RATA), within 30 operating days but not later than 60 calendar days after startup of the CTs.~~
- ~~Total emissions of NO_x from the two CTs shall not exceed 39 tons during all operation including startups, shutdowns and malfunctions as measured and recorded by the required NO_x continuous emissions monitoring systems (CEMS) during the temporary period. Data recorded before and after CEMS certification shall be included in the calculation.~~
- ~~Each CT shall be stack tested to demonstrate initial compliance with the applicable Subpart KKKK NO_x emission standard for each fuel to be fired. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup of each unit. Data collected during the above described RATA may be used to satisfy this 60-day test requirement provided all requirements of 40 CFR 60.8 and Subpart KKKK are met.~~
- ~~The BACT emissions standards of specific condition 18 do not apply to these CTs prior to Unit 1, 2 and 3 shutdown. Following shutdown of Units 1, 2 and 3 all restrictions of this permit apply, including the BACT limits of specific condition 18.~~

b. ~~Restriction on CC Operation:~~ No combined cycle operation of any unit is allowed prior to permanent shutdown of Units 1, 2, and 3.

c. ~~Monthly Operations Summary:~~ By the 10th calendar day of each month, the permittee shall record the following in a written or electronic log for each CT for the previous month of operation: fuel consumption, hours of operation, NO_x emissions in total tons for the month, and NO_x emissions in total tons for the described restricted period of operation. Information recorded and stored as an electronic file shall be available for inspection and printing within at least three days of a request by the Department. The fuel consumption shall be monitored in accordance with the provisions of 40 CFR 75 Appendix D.

{Permitting note: The limitation on total NO_x emissions and adherence to the emissions standards in Specific Conditions 18, 19 and 20 along with the compliance and recordkeeping requirements of this condition will effectively ensure that emissions increases of all PSD pollutants from the selected CTs operated in SC mode prior to Unit 1, 2 and 3 shutdown will be less than their respective Significant Emissions Rates per Rule 62-210.200 (Definitions SER), F.A.C.}

[Rules 62-4.070(3), 62-210.200(PTE) and 62-212.400(12)(PSD Avoidance), F.A.C.; 40 CFR 60.8, and 40 CFR Subpart KKKK]

Condition 15. Restricted Operation

In the original permit, the Department provided for operation of each CT for a limited number of hours on distillate fuel oil and also while using the duct burners (DB). The hours were allocated “per CT” on an “aggregate basis” meaning that the sum total of all hours was allocated to the sum total of all CT and that no CT was specifically limited in distillate oil or DB firing.

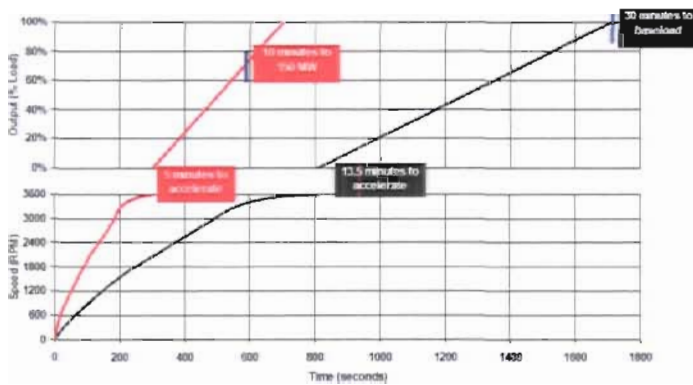
The applicant has requested language that has the same meaning but is more understandable to their personnel. The same 24-hour and 12-month BACT CO limits of 8.0 and 6 parts per million by volume, dry at 15 percent (ppmvd @15% oxygen (O₂)) respectively will apply. The clarifications will not impact BACT decisions such as whether oxidation catalyst will be more cost-effective for a single CT if that single unit made use of all hours of distillate oil use or DB operation available to the five CT.

In the original permit, the Department limited operation of simple cycle operation to 70% of full load. During simple cycle operation, CO continuous emissions monitoring system (CEMS) are not used. Based on data available to the Department about an older but similar CT within the PEF system, the Department had reason to believe that the five CT selected for the project would not comply with the CO BACT limits if operated at less than 70% of full load during simple cycle operation. The applicant was unable to provide enough details about the selected model to convince the Department otherwise.

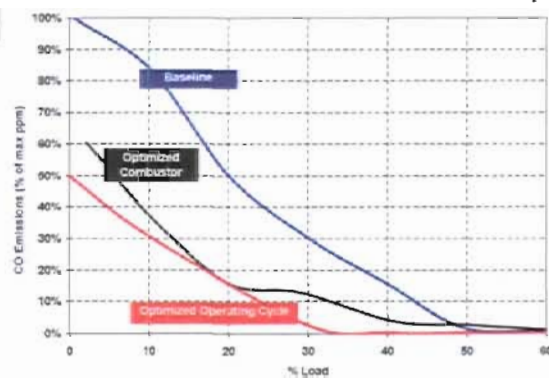
The Department researched available updated product literature about the Siemens CT line and conducted its own separate analysis within the original technical evaluation. According to Siemens:

“Reduced low load CO emissions were achieved by operational modifications which include a second modulating circuit added to turbine cooling air supply. When load is reduced, the second modulating circuit is opened bypassing additional cooling air around the combustor. Bypassing air around the combustor increases combustor flame temperature and hence limits CO production. There are other measures which can be taken to reduce CO if necessary, including changes to valve scheduling to allow compressor air to be bypassed into the exhaust. With this equipment & operational changes, CO is kept to <10 ppm down to between 45% and 50% load. This CO reduction will reduce total CO mass emissions by 70% per startup-shutdown cycle.”

According to the Department: *The following figures from the Siemens presentation compare original to improved startup characteristics. The graph on the left demonstrates the reduction of startup times which may be minimized to reduce CO emissions during these periods. The graph on the right suggests that the operating cycle can be improved to extend the “low CO” range to loads at less than 50%.*



Improved Startup Times to High Load.



Relative CO Emissions at Low Load.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

The Department does not dispute that the emissions can be reduced to less than 10 ppmvd in the 45-50% load range as suggested by the Siemens paper. However, the applicant has not provided information regarding the measures to actually be incorporated to avoid very high CO emissions during startups, shutdowns and low load (whether or not the low load is associated with startups and shutdowns).

The options described by Siemens may be available for the project to help achieve BACT level CO and VOC emission limits and possibly avoid installation of oxidation catalyst.

The applicant requests the opportunity to demonstrate the capability of each CT to operate in simple cycle at loads less than 70% while complying with the Department's BACT determination. They propose to demonstrate this capability during the initial compliance test. It is noted that CO-CEMS are not required for the occasional simple cycle operation of the four combustion turbines that comprise combined cycle Unit 4 or for the one combustion turbine that comprises simple cycle Unit 5. CO-CEMS are required for Unit 4 when it operates in combined cycle.

This request is acceptable with the following caveat and would be conducted during the initial compliance tests. Based on the foregoing discussion the Department does not yet have any assurance compliance can be continuously achieved at values less than 45% even if demonstrated by a one-time compliance test. Therefore, the demonstration would need to be made between 45 and 70% of full load.

On August 25, 2008, PEF further requested to be allowed to make the low load simple cycle compliance demonstration during compliance testing conducted in the future (i.e. after the initial compliance tests). The Department has determined that any such demonstrations should be made during the initial compliance testing as discussed above.

Afterwards, PEF can assess the CO-CEMS operational data (after initial compliance testing) during the startups and allowable low load operation of the four combined cycle turbines that comprise Unit 4 to determine how CO is affected by load variations. If the data show that compliance is also achieved at low load, the results can then be applied to those same four combustion turbines so that they may be operated at lower loads (i.e. < 70%) during any simple cycle operation. It should also be possible to infer from the same data how simple cycle Unit 5 behaves. PEF can then submit a report with a permit modification application to recognize operation of Unit 5 and the Unit 4 combustion turbines in simple cycle at loads less than demonstrated during the initial compliance testing.

The relevant condition will be modified as follows:

15. Restricted Operation: The permittee shall not exceed the following parameters following shutdown of Units 1, 2 and 3:
- The hours of operation of the CTs are not limited (8,760 hours per year).
 - Distillate oil firing is limited to 1,000 hours per CT (i.e. 5,000 hours total aggregate for all five CTs) (based on an average of 1,000 hours per CT) during any consecutive 12-month period.
 - Operation of the DBs is limited to 2,434 hours per DB (i.e. 9,736 hours aggregate for four DBs) (based on an average of 2,434 hours per DB) during any consecutive 12-month period.
 - Power (steam) augmentation shall be limited to 6,752 hours aggregate for the four CTs comprising Unit 4 (based on an average of 1,688 hours per CT during any consecutive 12-month period.

- e. Other than startup, shutdown, fuel switching or documented malfunction ~~the CTs shall operate above 70% load during simple cycle operation.~~ simple cycle CT operations shall be at a load not less than 45% or that load at which compliance was demonstrated at initial, whichever is higher.

Condition 16. Methods of Operation

The condition presently describes the operation of the new units after shut down of the existing units. The applicant believes the way in which the condition is worded can be misconstrued to prohibit the commissioning of the units while Units 1, 2 and 3 are still in operation.

The applicant advised they can only include the costs for the new units when they are in commercial operation. The applicant requests that the defining point between operation of the new units and shut down of the existing units be identified as the commercial availability for dispatch.

The introductory part of the relevant condition will be modified as follows:

16. Methods of Operation: Subject to the restrictions and requirements of this permit, the CTs may commence commercial operation and thereafter operate under the following methods of operation after ~~shutdown of Units 1, 2 and 3~~ cease commercial operation:

The following note will be added:

{Commence commercial operation means to have begun to generate electricity for sale, including the sale of test generation.}

Condition 17. New Source Performance Standards for NO_x

Presently, Condition 17, footnote b. does not allow correction of NO_x concentrations to 15% O₂ in accordance with the originally published version of 40 Code of Federal Regulations Part 60 (40 CFR 60), Subpart KKKK- Standards of Performance for Stationary Combustion Turbines.

Subpart KKKK is under reconsideration by the Environmental Protection Agency (reference Regulatory Identifier No. 2060-AO23) on "several relatively minor issues in the recently finalized stationary combustion." EPA representatives advised Department staff that among the changes will be one that *requires* rather than prohibits correction to 15% O₂.

Condition 17, Footnote b. will be modified as follows:

- b. A CEMS for NO_x shall be installed on the CT stacks and on the HRSG stacks. Correction to 15% O₂ is required ~~not allowed~~ consistent with the provisions of 40 CFR 60, Subpart KKKK.

Condition 18. Best Available Control Technology Emissions Standards for CO and VOC

The request regarding operation at low load during simple cycle operation is the same as discussed with respect to Condition 15.e. above.

Condition 18, Footnote c. will be modified as follows:

- c. CEMS for CO are required only on the HRSG stacks. Other than startup, shutdown, fuel switching or documented malfunction ~~the CTs shall operate above 70% load during simple cycle operation.~~ simple cycle CT operations shall be at a load not less than 45% or that load at which compliance was demonstrated at initial, whichever is higher.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

The applicant further requests that in addition to the enforcement discretion (reference Condition 18, Footnote f.) for the 12-month CO emission limit that the Department should also exercise enforcement discretion of the 24-hour CO. According to the applicant “the discretion should logically apply to both standards.”

The Department notes that the 24-hour CO limit is the key BACT determination and also serves as a surrogate for continuous compliance with the VOC BACT determination. The project triggered PSD and required a BACT determination only for CO and VOC. Enforcement discretion would render the BACT determination for this project almost meaningless for as much as two years. Discretion applies to the 12-month limit because it is lower than the 24-hour limit.

For reference, the Department issued permits allowing discretion only for the FP&L West County Energy Center projects where somewhat similar designs are employed on larger turbines. The Department allowed discretion only for the 12-month CO limit but not for the 24-hour limit. The Department did not allow any discretion for the following natural gas-fueled projects (with backup fuel oil) that were assigned the same 24-hour and 12-month CO BACT determination as the P.L. Bartow Repowering Project:

- FMPA Treasure Coast Energy center;
- FP&L Turkey Point Unit 5;
- FP&L West County Energy center; and
- OUC Stanton Unit B.

Condition 18, Footnote f. will not be modified.

Condition 19. New Source Performance Standard (NSPS) for SO₂

The fuel sulfur limits in the permit that control PM/PM₁₀ are more stringent than the requirements of Subpart KKKK. The applicant requests that compliance with the fuel sulfur limits in Condition 20.a. serve to demonstrate compliance with the Subpart KKKK standard for SO₂.

The Department cannot vary the requirements of a New Source Performance Standards (NSPS). Condition 19 refers to the compliance requirements in Subpart KKKK (reference: § 60.4370 - How often must I determine the sulfur content of the fuel?). The applicant can use those same requirements to satisfy the record keeping requirements of Condition 20.a. If the procedures described in Subpart KKKK are used, then the Department agrees that meeting the fuel sulfur limits in Condition 20.a. will insure compliance with the SO₂ limiting requirements of Condition 19.

No change will be made in this condition.

Condition 20. Measures to Limit Particulate Emissions (PM/PM₁₀/Fine Particulate Matter)

The following deletion of a typographical error will be made to the visible emissions standard:

- a. *Visible Emissions:* Visible emissions shall not exceed 10 percent opacity for each 6-minute block average. Compliance with the visible emissions standard shall be demonstrated by conducting tests in accordance with EPA Method 9.23

Condition 25. Allowable Data Exclusions

The applicant requests deletion of the Condition 25.d. that limits data exclusion for startups related to simple cycle operation to 1 hour in any 24-hour period. The applicant states that “it is more restrictive than the two (2) hours of possible exclusion under the Florida Administrative Code (F.A.C.).”

The Department notes that the Department can issue more stringent data exclusion conditions than the default values when issuing State Implementation Plan (SIP) emission standards. More stringent requirements are very common for SIP-based PSD permits and BACT determinations. The matter was assessed in the original technical evaluation and the actual rule cited. According to the rule:

*Excess emissions resulting from startup, shutdown or 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** in any 24 hour period unless specifically authorized by the Department for longer duration. (emphasis added)*

The graphs on page 6 above suggest that it is possible to reach full load in 15 minutes. The matter is discussed in the original technical evaluation: According to Siemens (with some minor paraphrasing):

“The original startup time from initiation to full power took approximately 30 minutes. The improved start time capability is as follows: 5 minutes from start initiation to minimum load, and then the GT is loaded at 30 MW/minute. This permits 150 MW within 10 minutes.

“To achieve the improved start capability the following steps were taken:

“Implement static frequency converter (static start), whereby the CTG generator operates as a motor replacing the mechanical starter motor. This allows more efficient and faster rotor acceleration than the equivalently sized mechanical starting motor.”

Expressing the exclusions in terms of minutes instead of hours will insure that all of the possible valid minutes-based data are used to maximize the valid hours in a single day. Similarly, the applicant will not use up the single available hour e.g. by conducting a 17 minute startup that straddles three distinct quarters of an hour that would otherwise invalidate the entire hour.

It is safe to conclude that startups (including some time to stabilize) in simple cycle will actually take between 15 and 30 minutes. It should be possible for the applicant to comply with the revised condition below and have several startups in a single day.

Condition 25.d. will be modified as follows:

- d. *Simple Cycle CT Startup:* For startup of a CT for the purpose of operation in simple cycle mode, up to 1 hour or 60 minutes of CEMS data in any 24-hour period of excess emissions can be excluded.

Condition 27. Test Methods

The reference to EPA Method 20 in the table comprising Condition 27 will be removed in favor of EPA Method 7E (also in the table), the CEMS requirements, relative accuracy test audits (RATA) and the compliance procedures in Subpart KKKK.

Condition 27 will be modified as follows:

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

27. Test Methods: Any required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
CTM-027 320	Procedure for Collection and Analysis of Ammonia in Stationary Source. {Notes: This is an EPA conditional test method.} The minimum detection limit shall be 1 ppm. Measurement of Vapor Phase Organic and Inorganic Emissions by Extractive Fourier Transform Infrared (FTIR) Spectroscopy
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources {Notes: The method shall be based on a continuous sampling train.}
18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography {Note: EPA Method 18 may be used (optional) concurrently with EPA Method 25A to deduct emissions of methane and ethane from the measured VOC emissions.}
20	Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines
25A	Determination of Volatile Organic Concentrations

No other methods may be used unless prior written approval is received from the Department.
[Rules 62-204.800, F.A.C.; 40 CFR 60, Appendix A]

Condition 28. Initial Compliance Determinations

The applicant requests inclusion of VOC as a pollutant for which (like CO) compliance with the mass emission rate limits can be demonstrated with flow measurements and CEMS. The Department will not make this change because an installed permanent CEMS is not required for VOC. Rather, an initial compliance test will be conducted for VOC using EPA Method 25A. The applicant may use the concurrent “flow measurements (or fuel measurements and F-factors)” with the EPA Method 25A instrument readings to demonstrate compliance with the VOC mass emission rate. Condition 28 will be modified as follows:

28. Initial Compliance Determinations: Each CT shall be stack tested to demonstrate initial compliance with the emission standards for CO, NO_x, VOC, visible emissions, and ammonia slip. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup of each unit configuration. Each unit shall be tested when firing natural gas, when using the duct burners and when firing distillate fuel oil. Reference method data collected during the required Relative Accuracy Test Audits (RATAs) may be used to demonstrate compliance with the initial CO and NO_x compliance tests. With appropriate flow measurements (or fuel measurements and approved F-factors), CEMS data may be used to demonstrate compliance with the CO mass rate emissions standards. With appropriate flow measurements (or fuel measurements and approved F-factors), the EPA Method 25A instrumental data may be used to demonstrate initial compliance with the VOC mass rate emissions standards. CO and NO_x emissions recorded by the CEMS shall also be reported for each run during tests for visible emissions, VOC and ammonia slip. The Department may require the permittee to conduct additional tests after major replacement or major repair of any

air pollution control equipment, such as the SCR catalyst, oxidation catalyst, DLN combustors, etc. [Rule 62-297.310(7)(a)1, F.A.C. and 40 CFR 60.8]

Condition 31. CEM Systems

In Condition 31.a., the applicant requests replacement of the term “Specification 4 or 4A” with “Specification 4 and/or 4A”. No change is needed since they mean the same thing. The applicant requests that the CO CEMS RATA language referring to a “continuous sampling train” be struck. The request is acceptable because EPA Method 10 for CO is sufficient for the purpose without specifying the continuous sampling train.

In Condition 31.b., the applicant requests removal of reference to EPA Method 20. Refer to the discussion in Condition 27 above.

In Condition 31.c., the applicant requests recognition that NO_x emissions are corrected to 15% O₂. Refer to the change in Condition 17, Footnote b.

Condition 31 will be modified as follows:

31. CEM Systems: The permittee shall install, calibrate, maintain, and operate continuous emission monitoring systems (CEMS) to measure and record the emissions of CO from the HRSG stacks and NO_x from all stacks in a manner sufficient to demonstrate continuous compliance with the CEMS emission standards of this section. Each monitoring system shall be installed, calibrated, and properly functioning prior to the initial performance tests. Within one working day of discovering emissions in excess of a CO or NO_x standard (and subject to the specified averaging period), the permittee shall notify the Compliance Authority.
- a. *CO Monitors*. The CO monitors shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4 or 4A within 60 calendar days of achieving permitted capacity as defined in Rule 62-297.310(2), F.A.C., but no later than 180 calendar days after initial startup. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F, and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Compliance Authority. The RATA tests required for the CO monitor shall be performed using EPA Method 10 in Appendix A of 40 CFR 60 ~~and shall be based on a continuous sampling train~~. The CO monitor span values shall be set appropriately considering the allowable methods of operation and corresponding emission standards.
 - b. *NO_x Monitors*. Each NO_x monitor shall be certified, operated, and maintained in accordance with the requirements of 40 CFR 75. Record keeping and reporting shall be conducted pursuant to Subparts F and G in 40 CFR 75. The RATA tests required for the NO_x monitor shall be performed using EPA Method ~~20 or~~ 7E in Appendix A of 40 CFR 60.
 - c. *Diluent Monitors*. The oxygen (O₂) or carbon dioxide (CO₂) content of the flue gas shall be monitored at the location where NO_x and CO are ~~is~~ monitored to correct the measured emissions rates to 15% oxygen. If a CO₂ monitor is installed, the oxygen content of the flue gas shall be calculated using F-factors that are appropriate for the fuel fired. Each monitor shall comply with the performance and quality assurance requirements of 40 CFR 75.

Condition 32. CEM Data Requirements

The applicant requests recognition that NO_x emissions are corrected to 15% O₂. Refer to the change in Condition 17, Footnote b. and Condition 31.c.

Condition 32, first bullet will be modified as follows:

32. CEM Data Requirements:

- *Data Collection:* Emissions shall be monitored and recorded at all times including startup, operation, shutdown, and malfunction except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments. The CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over an hour. If the CEMS measures concentration on a wet basis, the CEM system shall include provisions to determine the moisture content of the exhaust gas and an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Alternatively, the owner or operator may develop through manual stack test measurements a curve of moisture contents in the exhaust gas versus load for each allowable fuel, and use these typical values in an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Final results of the CEMS shall be expressed as ppmvd of NO_x and CO corrected to 15% oxygen and as ppmvd of NO_x (~~uncorrected~~). The CEMS shall be used to demonstrate compliance with the CEMS emission standards for CO and NO_x as specified in this permit. For purposes of determining compliance with the CEMS emissions standards of this permit, missing (or excluded) data shall not be substituted. Upon request by the Department, the CEMS emission rates shall be corrected to ISO conditions.

2. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. No air quality modeling analysis is required because the project does not result in a significant increase in emissions. Al Linero is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at the Department's Bureau of Air Regulation at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

DRAFT PERMIT

Day Month, 2008

Electronically Sent – Received Receipt Requested

Thomas.Lawery@pgnmail.com

Mr. Thomas Lawery, Plant Manager

P.L. Bartow Power Plant

Florida Power Corporation dba

Progress Energy Florida (PEF)

1601 Weedon Island Drive

St. Petersburg, Florida 33711

Re: DEP File No. 1030011-012-AC (PSD-FL-381A)
P.L. Bartow Power Plant Repowering Project
Modification of Interim Operation Modes

Dear Mr. Lawery:

On May 6, 2008, PEF submitted a permit modification application requesting changes to certain specific conditions of the air construction permit [reference: DEP File No. 1030011-010-AC (PSD-FL-381)] that authorized the replacement of the three residual fuel oil-fired steam electrical generators with a natural gas-fueled combined cycle unit and a natural gas-fueled simple cycle unit.

The key requested modification to the permit is the elimination of an interim period during which the four combustion turbines that comprise the combined cycle unit (presently under construction) can operate in simple cycle (higher emitting) mode. The requests were assessed in the Department's Technical Evaluation and Preliminary Determination issued on September 4, 2008.

The following sections or conditions in Permit No. 1030011-010-AC (PSD-FL-381) are hereby modified as shown below in strike through (~~strike through~~) and double underline format.

Section III, Subsection A, Emissions Unit Table

The title of the table shall now read:

Emissions Units Comprising Combined Cycle Unit 4 and Simple Cycle Unit 5.

(The rest of the table is unchanged)

6. DLN Combustion: The permittee shall install, operate and maintain Dry Low NO_x (DLN) systems to control NO_x emissions from each CT when firing natural gas. Prior to the initial emissions performance tests required for each CT, the DLN combustors and automated combustion turbine control system shall be tuned without a selective catalytic reduction (SCR) system in operation to achieve the permitted CO, ~~VOC~~ and NO_x levels for simple cycle operation. Thereafter, each system shall be maintained and tuned in accordance with the manufacturer's recommendations or industry standards.

14. Deleted in accordance with Permit Modification 1030011-012-AC.

Temporary Simple Cycle Operation of Two CTs Prior to Permanent Shutdown of Units 1, 2 and 3: The permittee may select any two of the five new CTs to be operated as simple cycle units prior to shutdown of Units 1, 2 and 3. The restrictions included in this condition apply only to those CTs chosen, and only during the described period. Once selected, only those CTs chosen may be operated prior to shutdown of Units 1, 2 and 3 in accordance with the following restrictions:

a. Restriction on SC Operation:

- ~~The combined operation of the two CTs shall not exceed 1,100 hours.~~
- ~~A NO_x CEMS shall be installed and operating in each stack prior to startup of the CTs in order to collect and record data for the purpose of demonstrating compliance with this requirement. Notwithstanding the relative accuracy test audit (RATA) grace period described in 40 CFR 75 Appendix B, the NO_x CEMS shall be fully certified in accordance with the requirements of 40 CFR 75 (including a RATA), within 30 operating days but not later than 60 calendar days after startup of the CTs.~~
- ~~Total emissions of NO_x from the two CTs shall not exceed 39 tons during all operation including startups, shutdowns and malfunctions as measured and recorded by the required NO_x continuous emissions monitoring systems (CEMS) during the temporary period. Data recorded before and after CEMS certification shall be included in the calculation.~~
- ~~Each CT shall be stack tested to demonstrate initial compliance with the applicable Subpart KKKK NO_x emission standard for each fuel to be fired. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup of each unit. Data collected during the above described RATA may be used to satisfy this 60 day test requirement provided all requirements of 40 CFR 60.8 and Subpart KKKK are met.~~
- ~~The BACT emissions standards of specific condition 18 do not apply to these CTs prior to Unit 1, 2 and 3 shutdown. Following shutdown of Units 1, 2 and 3 all restrictions of this permit apply, including the BACT limits of specific condition 18.~~

b. Restriction on CC Operation: ~~No combined cycle operation of any unit is allowed prior to permanent shutdown of Units 1, 2, and 3.~~

c. Monthly Operations Summary: ~~By the 10th calendar day of each month, the permittee shall record the following in a written or electronic log for each CT for the previous month of operation: fuel consumption, hours of operation, NO_x emissions in total tons for the month, and NO_x emissions in total tons for the described restricted period of operation. Information recorded and stored as an electronic file shall be available for inspection and printing within at least three days of a request by the Department. The fuel consumption shall be monitored in accordance with the provisions of 40 CFR 75 Appendix D.~~

{Permitting note: The limitation on total NO_x emissions and adherence to the emissions standards in Specific Conditions 18, 19 and 20 along with the compliance and recordkeeping requirements of this condition will effectively ensure that emissions increases of all PSD pollutants from the selected CTs operated in SC mode prior to Unit 1, 2 and 3 shutdown will be less than their respective Significant Emissions Rates per Rule 62-210.200 (Definitions-SER), F.A.C.}

[Rules 62-4.070(3), 62-210.200(PTE) and 62-212.400(12)(PSD Avoidance), F.A.C.; 40 CFR 60.8, and 40 CFR Subpart KKKK]

15. Restricted Operation: The permittee shall not exceed the following parameters following shutdown of Units 1, 2 and 3:

- a. The hours of operation of the CTs are not limited (8,760 hours per year).
- b. Distillate oil firing is limited to ~~1,000 hours per CT~~ (i.e. 5,000 hours total aggregate for all five CTs) (based on an average of 1,000 hours per CT) during any consecutive 12-month period.
- c. Operation of the DBs is limited to ~~2,434 hours per DB~~ (i.e. 9,736 hours aggregate for four DBs) (based on an average of 2,434 hours per DB) during any consecutive 12-month period.
- d. Power (steam) augmentation shall be limited to 6,752 hours aggregate for the four CTs comprising Unit 4 (based on an average of 1,688 hours per CT during any consecutive 12-month period.
- e. Other than startup, shutdown, fuel switching or documented malfunction ~~the CTs, shall operate above 70% load during simple cycle operation.~~ simple cycle CT operations shall be at a load not less than 45% or that load at which compliance was demonstrated at initial, whichever is higher.

16. Methods of Operation: Subject to the restrictions and requirements of this permit, the CTs may commence commercial operation and thereafter operate under the following methods of operation after shutdown of Units 1, 2 and 3 cease commercial operation:

{Commence commercial operation means to have begun to generate electricity for sale, including the sale of test generation.}

(The rest of the condition is unchanged)

Condition 17, Footnote b. will be modified as follows:

- b. A CEMS for NO_x shall be installed on the CT stacks and on the HRSG stacks. Correction to 15% O₂ is required ~~not allowed~~ consistent with the provisions of 40 CFR 60, Subpart KKKK.

(The rest of Condition 17 is unchanged)

Condition 18, Footnote c. will be modified as follows:

- c. CEMS for CO are required only on the HRSG stacks. Other than startup, shutdown, fuel switching or documented malfunction ~~the CTs, shall operate above 70% load during simple cycle operation.~~ simple cycle CT operations shall be at a load not less than 45% or that load at which compliance was demonstrated at initial, whichever is higher.

(The rest of Condition 18 is unchanged)

Condition 20.a. will be modified as follows:

- a. *Visible Emissions*: Visible emissions shall not exceed 10 percent opacity for each 6-minute block average. Compliance with the visible emissions standard shall be demonstrated by conducting tests in accordance with EPA Method 9.23

(The rest of Condition 20 is unchanged)

Condition 25.d. will be modified as follows:

- b. *Simple Cycle CT Startup*: For startup of a CT for the purpose of operation in simple cycle mode, up to 1 hour or 60 minutes of CEMS data in any 24-hour period of excess emissions can be excluded.

(The rest of Condition 25 is unchanged)

27. Test Methods: Any required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
CTM-027 320	Procedure for Collection and Analysis of Ammonia in Stationary Source. {Notes: This is an EPA conditional test method.} The minimum detection limit shall be 1 ppm. Measurement of Vapor Phase Organic and Inorganic Emissions by Extractive Fourier Transform Infrared (FTIR) Spectroscopy
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources {Notes: The method shall be based on a continuous sampling train.}
18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography {Note: EPA Method 18 may be used (optional) concurrently with EPA Method 25A to deduct emissions of methane and ethane from the measured VOC emissions.}
20	Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines
25A	Determination of Volatile Organic Concentrations

No other methods may be used unless prior written approval is received from the Department.
[Rules 62-204.800, F.A.C.; 40 CFR 60, Appendix A]

28. Initial Compliance Determinations: Each CT shall be stack tested to demonstrate initial compliance with the emission standards for CO, NO_x, VOC, visible emissions, and ammonia slip. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup of each unit configuration. Each unit shall be tested when firing natural gas, when using the duct burners and when firing distillate fuel oil. Reference method data collected during the required Relative Accuracy Test Audits (RATAs) may be used to demonstrate compliance with the initial CO and NO_x compliance tests. With appropriate flow measurements (or fuel measurements and approved F-factors), CEMS data may be used to demonstrate compliance with the CO mass rate emissions standards. With appropriate flow measurements (or fuel measurements and approved F-factors), the EPA Method 25A instrumental data may be used to demonstrate initial compliance with the VOC mass rate emissions standards. CO and NO_x emissions recorded by the CEMS shall also be reported for each run during tests for visible emissions, VOC and ammonia slip. The Department may require the permittee to conduct additional tests after major replacement or major repair of any air pollution control equipment, such as the SCR catalyst, oxidation catalyst, DLN combustors, etc. [Rule 62-297.310(7)(a)1, F.A.C. and 40 CFR 60.8]
31. CEM Systems: The permittee shall install, calibrate, maintain, and operate continuous emission monitoring systems (CEMS) to measure and record the emissions of CO from the HRSG stacks and NO_x from all stacks in a manner sufficient to demonstrate continuous compliance with the CEMS emission standards of this section. Each monitoring system shall be installed, calibrated, and properly functioning prior to the initial performance tests. Within one working day of discovering

emissions in excess of a CO or NO_x standard (and subject to the specified averaging period), the permittee shall notify the Compliance Authority.

- a. *CO Monitors.* The CO monitors shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4 or 4A within 60 calendar days of achieving permitted capacity as defined in Rule 62-297.310(2), F.A.C., but no later than 180 calendar days after initial startup. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F, and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Compliance Authority. The RATA tests required for the CO monitor shall be performed using EPA Method 10 in Appendix A of 40 CFR 60 ~~and shall be based on a continuous sampling train~~. The CO monitor span values shall be set appropriately considering the allowable methods of operation and corresponding emission standards.
- b. *NO_x Monitors.* Each NO_x monitor shall be certified, operated, and maintained in accordance with the requirements of 40 CFR 75. Record keeping and reporting shall be conducted pursuant to Subparts F and G in 40 CFR 75. The RATA tests required for the NO_x monitor shall be performed using EPA Method ~~20 or~~ 7E in Appendix A of 40 CFR 60.
- c. *Diluent Monitors.* The oxygen (O₂) or carbon dioxide (CO₂) content of the flue gas shall be monitored at the location where NO_x and CO are ~~is~~ monitored to correct the measured emissions rates to 15% oxygen. If a CO₂ monitor is installed, the oxygen content of the flue gas shall be calculated using F-factors that are appropriate for the fuel fired. Each monitor shall comply with the performance and quality assurance requirements of 40 CFR 75.

Condition 32, first bullet will be modified as follows:

32. CEM Data Requirements:

- *Data Collection:* Emissions shall be monitored and recorded at all times including startup, operation, shutdown, and malfunction except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments. The CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over an hour. If the CEMS measures concentration on a wet basis, the CEM system shall include provisions to determine the moisture content of the exhaust gas and an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Alternatively, the owner or operator may develop through manual stack test measurements a curve of moisture contents in the exhaust gas versus load for each allowable fuel, and use these typical values in an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Final results of the CEMS shall be expressed as ppmvd of NO_x and CO corrected to 15% oxygen ~~and as ppmvd of NO_x (uncorrected)~~. The CEMS shall be used to demonstrate compliance with the CEMS emission standards for CO and NO_x as specified in this permit. For purposes of determining compliance with the CEMS emissions standards of this permit, missing (or excluded) data shall not be substituted. Upon request by the Department, the CEMS emission rates shall be corrected to ISO conditions.

(The rest of Condition 32 is unchanged)

A copy of this letter shall be filed with the referenced permit and shall become part of the permit. Any party to this permitting decision (order) has the right to seek judicial review of it under Section 120.68 of the Florida Statutes, by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate

District Court of Appeal. The notice must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

Joseph Kahn, Director
Division of Air Resource Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this PERMIT MODIFICATION was sent by electronic mail with received receipt requested before the close of business on _____ to the persons listed below:

cc: Thomas Lawery: thomas.lawery@pgnmail.com
Chris Bradley, PEF: chris.bradley@pgnmail.com
Scott Osbourn, P.E., Golder: sosbourn@golder.com
Dee Morse, NPS: dee_morse@nps.gov
Meredith Bond, U.S. FWS: meredith_bond@fws.gov
Kathleen Forney: forney.kathleen@epa.gov
Mara Nasca, DEPSWD: mara.nasca@dep.state.fl.us
Mayor, City of St. Petersburg: mayor@stpete.org
Administrator, Pinellas County: sspratt@pinellascounty.org
Peter Hessling, PCDEM: phesslin@pinellascounty.org

Clerk Stamp

FILING AND ACKNOWLEDGMENT
FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

(Clerk)

(Date)

Livingston, Sylvia

From: Meredith_Bond@fws.gov
Sent: Monday, September 08, 2008 3:30 PM
To: Livingston, Sylvia
Cc: Catherine_Collins%FWS@fws.gov
Subject: Re: BARTOW PLANT; 1030011-012-AC (PSD-FL-381A)
Attachments: 1030011-012-AC_INTENT381A.pdf

Sylvia,

Thank you for the e-notification. I was able to access the files.

***Please include Catherine Collins of my office on any future transmissions - she's the engineer handing permit project in Florida. Her e-mail address is in the cc list above.**

Thank you!

-- Meredith

CDR Meredith Bond, P.E., USPHS
 Deputy Chief
 U.S. Fish and Wildlife Service
 Branch of Air Quality
 7333 W Jefferson Ave., Suite 375
 Lakewood, CO 80235
 303-914-3808
 303-969-5444 fax
 Meredith_Bond@fws.gov

"Livingston, Sylvia" <Sylvia.Livingston@dep.state.fl.us>

09/08/2008 12:45 PM

To <thomas.lawery@pgnmail.com>, <chris.bradley@pgnmail.com>

cc <sosbourn@golder.com>, <dee_morse@nps.gov>, <meredith_bond@fws.gov>, <fomey.kathleen@epa.gov>, "Nasca, Mara" <Mara.Nasca@dep.state.fl.us>, <mayor@stpete.org>, <sspratt@pinellascounty.org>, <phesslin@pinellascounty.org>, "Linero, Alvaro" <Alvaro.Linero@dep.state.fl.us>, "Heron, Teresa" <Teresa.Heron@dep.state.fl.us>, "Walker, Elizabeth \A\I\I"

<Elizabeth.Walker@dep.state.fl.us>, "Gibson, Victoria" <Victoria.Gibson@dep.state.fl.us>

Subject BARTOW PLANT; 1030011-012-AC (PSD-FL-381A)

Dear Sir/Madam:

Attached is the official *Written Notice of Intent to Issue* for the project referenced below. Click on the link displayed below to access the permit project documents and send a "reply" message verifying receipt of the document(s) provided in the link; this may be done by selecting "Reply" on the menu bar of your e-mail software, *noting that you can view the documents*, and then selecting "Send". **We must receive verification that you are able to access the documents.** Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document(s).

9/15/2008

done by selecting "Reply" on the menu bar of your e-mail software, noting that you can view the documents, and then selecting "Send". We must receive verification that you are able to access the documents. Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document(s).

Click on the following link to access the permit project documents:

http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/1030011.012.AC.D_pdf.zip
<http://arm-permit2k.dep.state.fl.us/adh/prod/pdf_permit_zip_files/1030011.012.AC.D_pdf.zip>

Owner/Company Name: FLORIDA POWER CORPDBAPROGRESS ENERGY FLA Facility Name: BARTOW PLANT
Project Number: 1030011-012-AC Permit Status: DRAFT Permit Activity: CONSTRUCTION/
REPOWERING PROJECT REVISION Facility County: PINELLAS
Processor: Theresa Heron/ Al Linero

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. Access these documents by clicking on the link provided above, or search for other project documents using the "Air Permit Documents Search" website at

<http://www.dep.state.fl.us/air/eproducts/apds/default.asp>
<<http://www.dep.state.fl.us/air/eproducts/apds/default.asp>>

Permit project documents are addressed in this email may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible, and verify that they are accessible. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record. If you have any problems opening the documents or would like further information, please contact the Florida Department of Environmental Protection, Bureau of Air Regulation at (850)488-0114.

Sylvia Livingston
Bureau of Air Regulation
Division of Air Resource Management (DARM)
850/921-9506

<<1030011-012-AC_INTENT381A.pdf>>

Livingston, Sylvia

From: Meredith_Bond@fws.gov
Sent: Monday, September 08, 2008 3:30 PM
To: Livingston, Sylvia
Cc: Catherine_Collins%FWS@fws.gov
Subject: Re: BARTOW PLANT; 1030011-012-AC (PSD-FL-381A)
Attachments: 1030011-012-AC_INTENT381A.pdf

Sylvia,

Thank you for the e-notification. I was able to access the files.

***Please include Catherine Collins of my office on any future transmissions - she's the engineer handing permit project in Florida. Her e-mail address is in the cc list above.**

Thank you!

-- Meredith

CDR Meredith Bond, P.E., USPHS
 Deputy Chief
 U.S. Fish and Wildlife Service
 Branch of Air Quality
 7333 W Jefferson Ave., Suite 375
 Lakewood, CO 80235
 303-914-3808
 303-969-5444 fax
 Meredith_Bond@fws.gov

"Livingston, Sylvia" <Sylvia.Livingston@dep.state.fl.us>

09/08/2008 12:45 PM

To <thomas.lawery@pgnmail.com>, <chris.bradley@pgnmail.com>
 cc <sosbourn@golder.com>, <dee_morse@nps.gov>, <meredith_bond@fws.gov>, <fomey.kathleen@epa.gov>, "Nasca, Mara" <Mara.Nasca@dep.state.fl.us>, <mayor@stpete.org>, <sspratt@pinellascounty.org>, <pnesslin@pinellascounty.org>, "Linero, Alvaro" <Alvaro.Linero@dep.state.fl.us>, "Heron, Teresa" <Teresa.Heron@dep.state.fl.us>, "Walker, Elizabeth \A\I\)" <Elizabeth.Walker@dep.state.fl.us>, "Gibson, Victoria" <Victoria.Gibson@dep.state.fl.us>
 Subject BARTOW PLANT; 1030011-012-AC (PSD-FL-381A)

Dear Sir/Madam:

Attached is the official *Written Notice of Intent to Issue* for the project referenced below. Click on the link displayed below to access the permit project documents and send a "reply" message verifying receipt of the document(s) provided in the link; this may be done by selecting "Reply" on the menu bar of your e-mail software, *noting that you can view the documents*, and then selecting "Send". **We must receive verification that you are able to access the documents.** Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document(s).

9/15/2008

Click on the following link to access the permit project documents:

http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/1030011.012.AC.D_pdf.zip

Owner/Company Name: FLORIDA POWER CORPDBAPROGRESS ENERGY FLA

Facility Name: BARTOW PLANT

Project Number: 1030011-012-AC

Permit Status: DRAFT

Permit Activity: CONSTRUCTION/ REPOWERING PROJECT REVISION

Facility County: PINELLAS

Processor: Theresa Heron/ Al Linero

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. Access these documents by clicking on the link provided above, or search for other project documents using the "Air Permit Documents Search" website at <http://www.dep.state.fl.us/air/eproducts/apds/default.asp>.

Permit project documents are addressed in this email may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible, and verify that they are accessible. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record. If you have any problems opening the documents or would like further information, please contact the Florida Department of Environmental Protection, Bureau of Air Regulation at (850)488-0114.

Sylvia Livingston
Bureau of Air Regulation
Division of Air Resource Management (DARM)
850/921-9506

<<1030011-012-AC_INTENT381A.pdf>>

The Department of Environmental Protection values your feedback as a customer. DEP Secretary Michael W. Sole is committed to continuously assessing and improving the level and quality of services provided to you. Please take a few minutes to comment on the quality of service you received. Simply click on [this link to the DEP Customer Survey](#). Thank you in advance for completing the survey.

Livingston, Sylvia

From: Nasca, Mara
Sent: Monday, September 08, 2008 4:01 PM
To: Prickett, Patricia
Cc: Zhang-Torres; Livingston, Sylvia
Subject: FW: BARTOW PLANT; 1030011-012-AC (PSD-FL-381A)

Attachments: 1030011-012-AC_INTENT381A.pdf

Thanks

From: Livingston, Sylvia
Sent: Monday, September 08, 2008 2:45 PM
To: 'thomas.lawery@pgnmail.com'; 'chris.bradley@pgnmail.com'
Cc: 'sosbourn@golder.com'; 'dee_morse@nps.gov'; 'rneredith_bond@fws.gov'; 'forney.kathleen@epa.gov'; Nasca, Mara; 'mayor@stpete.org'; 'sspratt@pinellascounty.org'; 'phesslin@pinellascounty.org'; Linero, Alvaro; Heron, Teresa; Walker, Elizabeth (AIR); Gibson, Victoria
Subject: BARTOW PLANT; 1030011-012-AC (PSD-FL-381A)

Dear Sir/Madam:

Attached is the official *Written Notice of Intent to Issue* for the project referenced below. Click on the link displayed below to access the permit project documents and send a "reply" message verifying receipt of the document(s) provided in the link; this may be done by selecting "Reply" on the menu bar of your e-mail software, *noting that you can view the documents*, and then selecting "Send". **We must receive verification that you are able to access the documents.** Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document(s).

Click on the following link to access the permit project documents:

http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/1030011.012.AC.D_pdf.zip

Owner/Company Name: FLORIDA POWER CORPDBAPROGRESS ENERGY FLA
Facility Name: BARTOW PLANT
Project Number: 1030011-012-AC
Permit Status: DRAFT
Permit Activity: CONSTRUCTION/ REPOWERING PROJECT REVISION
Facility County: PINELLAS
Processor: Theresa Heron/ Al Linero

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. Access these documents by clicking on the link provided above, or search for other project documents using the "*Air Permit Documents Search*" website at <http://www.dep.state.fl.us/air/eproducts/apds/default.asp>.

Permit project documents addressed in this email may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible, and verify that they are accessible. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record. If you have any problems opening the documents or would like further information, please contact the Florida Department of Environmental Protection, Bureau of Air Regulation at (850)488-0114.

Livingston, Sylvia

From: Hessling, Peter A [phesslin@co.pinellas.fl.us]
Sent: Monday, September 08, 2008 4:10 PM
To: Livingston, Sylvia
Subject: RE: BARTOW PLANT; 1030011-012-AC (PSD-FL-381A)

We have received the notice and the documents are viewable. Thank you.

Peter Hessling
Air Quality Division Director
Pinellas Co. Dept. of Envir. Mgt.

From: Livingston, Sylvia [mailto:Sylvia.Livingston@dep.state.fl.us]
Sent: Monday, September 08, 2008 2:45 PM
To: thomas.lawery@pgnmail.com; chris.bradley@pgnmail.com
Cc: sosbourn@golder.com; dee_morse@nps.gov; meredith_bond@fws.gov; forney.kathleen@epa.gov; Nasca, Mara; mayor@stpete.org; sspratt@pinellascounty.org; Hessling, Peter A; Linero, Alvaro; Heron, Teresa; Walker, Elizabeth (AIR); Gibson, Victoria
Subject: BARTOW PLANT; 1030011-012-AC (PSD-FL-381A)

Dear Sir/Madam:

Attached is the official *Written Notice of Intent to Issue* for the project referenced below. Click on the link displayed below to access the permit project documents and send a "reply" message verifying receipt of the document(s) provided in the link; this may be done by selecting "Reply" on the menu bar of your e-mail software, *noting that you can view the documents*, and then selecting "Send". **We must receive verification that you are able to access the documents.** Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document(s).

Click on the following link to access the permit project documents:

http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/1030011.012.AC.D_pdf.zip

Owner/Company Name: FLORIDA POWER CORPDBAPROGRESS ENERGY FLA

Facility Name: BARTOW PLANT

Project Number: 1030011-012-AC

Permit Status: DRAFT

Permit Activity: CONSTRUCTION/ REPOWERING PROJECT REVISION

Facility County: PINELLAS

Processor: Theresa Heron/ Al Linero

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. Access these documents by clicking on the link provided above, or search for other project documents using the "*Air Permit Documents Search*" website at <http://www.dep.state.fl.us/air/eproducts/apds/default.asp>.

Permit project documents are addressed in this email may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible, and verify that they are accessible. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record. If you have any problems opening the documents or would like further information, please contact the Florida Department of Environmental Protection, Bureau of Air Regulation at (850)488-0114.

Sylvia Livingston
Bureau of Air Regulation

9/15/2008

Livingston, Sylvia

From: Dee_Morse@nps.gov
Sent: Monday, September 08, 2008 4:56 PM
To: Livingston, Sylvia
Subject: Re: BARTOW PLANT; 1030011-012-AC (PSD-FL-381A)

Attachments: 1030011-012-AC_INTENT381A.pdf



1030011-012-AC_I
NTENT381A.pdf ...

Document received

Dee Morse
Environmental Protection Specialist
Air Resources Division
Natural Resource Program Center
National Park Service
Phone: 303 969-2817
Fax: 303 969-2822
e-mail: dee_morse@nps.gov

"Livingston,
Sylvia"
<Sylvia.Livingsto
n@dep.state.fl.us
>

09/08/2008 02:45
PM AST

<thomas.lawery@pgnmail.com>, To
<chris.bradley@pgnmail.com>
cc
<sosbourn@golder.com>,
<dee_morse@nps.gov>,
<meredith_bond@fws.gov>,
<forney.kathleen@epa.gov>, "Nasca,
Mara" <Mara.Nasca@dep.state.fl.us>,
<mayor@stpete.org>,
<sspratt@pinellascounty.org>,
<phesslin@pinellascounty.org>,
"Linero, Alvaro"
<Alvaro.Linero@dep.state.fl.us>,
"Heron, Teresa"
<Teresa.Heron@dep.state.fl.us>,
"Walker, Elizabeth \ (AIR\)"
<Elizabeth.Walker@dep.state.fl.us>,
"Gibson, Victoria"
<Victoria.Gibson@dep.state.fl.us>
Subject
BARTOW PLANT; 1030011-012-AC
(PSD-FL-381A)

Dear Sir/Madam:
Attached is the official Written Notice of Intent to Issue for the project referenced

below. Click on the link displayed below to access the permit project documents and send a "reply" message verifying receipt of the document(s) provided in the link; this may be done by selecting "Reply" on the menu bar of your e-mail software, noting that you can view the documents, and then selecting "Send". We must receive verification that you are able to access the documents. Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document(s).

Click on the following link to access the permit project documents:

http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/1030011.012.AC.D_pdf.zip

Owner/Company Name: FLORIDA POWER CORP DBA PROGRESS ENERGY FLA Facility Name: BARTOW PLANT
Project Number: 1030011-012-AC Permit Status: DRAFT Permit Activity: CONSTRUCTION/
REPOWERING PROJECT REVISION Facility County: PINELLAS
Processor: Theresa Heron/ Al Linero

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. Access these documents by clicking on the link provided above, or search for other project documents using the "Air Permit Documents Search" website at

<http://www.dep.state.fl.us/air/eproducts/apds/default.asp>

Permit project documents addressed in this email may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible, and verify that they are accessible.

Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record. If you have any problems opening the documents or would like further information, please contact the Florida Department of Environmental Protection, Bureau of Air Regulation at (850)488-0114.

Sylvia Livingston
Bureau of Air Regulation
Division of Air Resource Management (DARM)
850/921-9506

<<1030011-012-AC_INTENT381A.pdf>>

The Department of Environmental Protection values your feedback as a customer. DEP Secretary Michael W. Sole is committed to continuously assessing and improving the level and quality of services provided to you.

Please take a few minutes to comment on the quality of service you received. Simply click on this link to the DEP Customer Survey. Thank you in advance for completing the survey. (See attached file: 1030011-012-AC_INTENT381A.pdf)

Livingston, Sylvia

From: Osbourn, Scott [Scott_Osbourn@golder.com]
To: undisclosed-recipients
Sent: Monday, September 08, 2008 2:56 PM
Subject: Read: BARTOW PLANT; 1030011-012-AC (PSD-FL-381A)

Your message

To: Scott_Osbourn@golder.com
Subject:

was read on 9/8/2008 2:56 PM.

Livingston, Sylvia

From: Exchange Administrator
Sent: Monday, September 08, 2008 2:46 PM
To: Livingston, Sylvia
Subject: Delivery Status Notification (Relay)

Attachments: ATT253863.txt; BARTOW PLANT; 1030011-012-AC (PSD-FL-381A)



ATT253863.txt
(282 B)



BARTOW PLANT;
1030011-012-AC (...)

This is an automatically generated Delivery Status Notification.

Your message has been successfully relayed to the following recipients, but the requested delivery status notifications may not be generated by the destination.

mayor@stpete.org

Livingston, Sylvia

From: Mail Delivery System [MAILER-DAEMON@mseive01.rtp.epa.gov]
Sent: Monday, September 08, 2008 2:46 PM
To: Livingston, Sylvia
Subject: Successful Mail Delivery Report

Attachments: Delivery report; Message Headers



Delivery report.txt
(484 B)



Message
Headers.txt (2 KB)

This is the mail system at host mseive01.rtp.epa.gov.

Your message was successfully delivered to the destination(s) listed below. If the message was delivered to mailbox you will receive no further notifications. Otherwise you may still receive notifications of mail delivery errors from other systems.

The mail system

<forney.kathleen@epa.gov>: delivery via 127.0.0.1[127.0.0.1]:10025: 250 OK,
sent 48C572CB_6082_959_5 3E69E443D2

Message Headers.txt

Received: from tlhexsprot2.floridadep.net (tlhexsprot2.floridadep.net [199.73.152.8])
by mseive01.rtp.epa.gov (Postfix) with ESMTP id 4DB81443D1
for <forney.kathleen@epa.gov>; Mon, 8 Sep 2008 14:45:28 -0400 (EDT)
Content-Transfer-Encoding: 7bit
Importance: normal
Priority: normal
Received: from tlhexsmb4.floridadep.net ([172.20.30.47]) by tlhexsprot2.floridadep.net with Microsoft
SMTPSVC(5.0.2195.6713); Mon, 8 Sep 2008 14:45:26 -0400
X-MimeOLE: Produced By Microsoft MimeOLE V6.00.2800.1896
Content-Class: urn:content-classes:message
Return-Receipt-To: "Livingston, Sylvia" <Sylvia.Livingston@dep.state.fl.us>
MIME-Version: 1.0
Content-Type: multipart/mixed;
boundary="----_NextPart_001_01C911E3.0E3ADF7E"
Disposition-Notification-To: "Livingston, Sylvia" <Sylvia.Livingston@dep.state.fl.us>
Subject: BARTOW PLANT; 1030011-012-AC (PSD-FL-381A)
Date: Mon, 8 Sep 2008 14:45:25 -0400
Message-ID: <864D0E673032DD47ABE8B4EE542DF7CAC71D5B@tlhexsmb4.floridadep.net>
X-MS-Has-Attach: yes
X-MS-TNEF-Correlator:
Thread-Topic: BARTOW PLANT; 1030011-012-AC (PSD-FL-381A)
thread-index: AckR4w5YJVXgCP+VSzymBv0TtpaXdA==
From: "Livingston, Sylvia" <Sylvia.Livingston@dep.state.fl.us>
To: <thomas.lawery@pgnmail.com>,
<chris.bradley@pgnmail.com>
Cc: <sosbourn@golder.com>,
<dee_morse@nps.gov>,
<meredith_bond@fws.gov>,
<forney.kathleen@epa.gov>,
"Nasca, Mara" <Mara.Nasca@dep.state.fl.us>,
<mayor@stpete.org>,
<sspratt@pinellascounty.org>,
<phesslin@pinellascounty.org>,
"Linero, Alvaro" <Alvaro.Linero@dep.state.fl.us>,
"Heron, Teresa" <Teresa.Heron@dep.state.fl.us>,
"Walker, Elizabeth \{AIR\}" <Elizabeth.Walker@dep.state.fl.us>,
"Gibson, Victoria" <Victoria.Gibson@dep.state.fl.us>
X-OriginalArrivalTime: 08 Sep 2008 18:45:26.0081 (UTC) FILETIME=[0ED44310:01C911E3]



May 02, 2008

RECEIVED

MAY 06 2008

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

BUREAU OF AIR REGULATION

**RE: Request for PSD Air Construction Permit Revisions
DEP File No. 1030011-010-AC and PSD-FL-381
P.L. Bartow Power Plant Repowering Project**

Dear Mr. Linero,

Based on discussions between Progress Energy Florida (PEF) and the Department on April 9, 2008, this letter serves to transmit our air application package for revisions to the above-referenced permit. PEF understands that the revisions requested are administrative in nature and could likely be accomplished by issuance of a letter amendment to the current permit. There are other issues that PEF would like to address, such as the designation of the Bartow Plant site as a major source of hazardous air pollutants; however, the timing would be more appropriate when initial compliance testing is completed and the air construction permit conditions are incorporated into a revised Title V operating permit.

Accordingly, attached are the requested language revisions, as well as a professional engineer certification form and a certification form completed by the facility's responsible official. If you should have any questions regarding this request, please contact either Scott Osbourn, P.E. at (813) 287-1717 or me at (727) 820-5962. Thank you in advance for your timely consideration of this permit revision request.

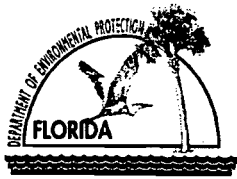
Sincerely,

A handwritten signature in cursive script that reads "Chris Bradley".

Chris Bradley
Senior Environmental Specialist

Enclosure

Cc: Scott Osbourn, P.E., Golder Associates



Department of Environmental Protection

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

RECEIVED

MAY 06 2008

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit:

- For any required purpose at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air operation permit;
- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment new source review, or maximum achievable control technology (MACT);
- To assume a restriction on the potential emissions of one or more pollutants to escape a requirement such as PSD review, nonattainment new source review, MACT, or Title V; or
- To establish, revise, or renew a plantwide applicability limit (PAL).

BUREAU OF AIR REGULATION

Air Operation Permit – Use this form to apply for:

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

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: Florida Power Corporation dba Progress Energy Florida, Inc.	
2. Site Name: Bartow Plant	
3. Facility Identification Number: 1030011	
4. Facility Location... Street Address or Other Locator: 1601 Weedon Island Drive City: St. Petersburg County: Pinellas Zip Code: 33702	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Title V Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Application Contact

1. Application Contact Name: Chris Bradley, Senior Environmental Specialist	
2. Application Contact Mailing Address... Organization/Firm: Progress Energy Florida, Inc. Street Address: PO Box 14042, MAC PEF-903 City: St. Petersburg State: FL Zip Code: 33701	
3. Application Contact Telephone Numbers... Telephone: (727) 820-5962 ext. Fax: (727) 820-5229	
4. Application Contact E-mail Address: chris.bradley@pgnmail.com	

Application Processing Information (DEP Use)

1. Date of Receipt of Application: 5/6/08	3. PSD Number (if applicable): 381A
2. Project Number(s): 1030011-012-AL	4. Siting Number (if applicable):

Purpose of Application

This application for air permit is being submitted to obtain: (Check one)

Air Construction Permit

- Air construction permit.
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL).
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL), and separate air construction permit to authorize construction or modification of one or more emissions units covered by the PAL.

Air Operation Permit

- Initial Title V air operation permit.
- Title V air operation permit revision.
- Title V air operation permit renewal.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

- Air construction permit and Title V permit revision, incorporating the proposed project.
- Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

- I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

This application is submitted to request administrative revisions to the current Bartow Repowering air construction permit (Permit No. 1030011-010-AC). The revisions include the removal of an "interim operating mode" that was previously requested, as well as other minor permit hygiene issues. See attached requested permit language (i.e., strikethrough/underline format).

Scope of Application


Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
	Simple- and Combined Cycle F-Class Combustion Turbine with HRSG Duct Firing	AC1A	
	Simple- and Combined Cycle F-Class Combustion Turbine with HRSG Duct Firing	AC1A	
	Simple- and Combined Cycle F-Class Combustion Turbine with HRSG Duct Firing	AC1A	
	Simple- and Combined Cycle F-Class Combustion Turbine with HRSG Duct Firing	AC1A	
	Auxiliary Boiler	AC1A	
	Fuel Gas Heaters	AC1A	

Application Processing Fee

Check one: Attached - Amount: _____ Not Applicable

Owner/Authorized Representative Statement

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

1. Owner/Authorized Representative Name : Thomas Lawery, Plant Manager
2. Owner/Authorized Representative Mailing Address... Organization/Firm: Progress Energy Florida, Inc. Street Address: 1601 Weedon Island Drive City: St. Petersburg State: FL Zip Code: 33702
3. Owner/Authorized Representative Telephone Numbers... Telephone: (727) 827-6111 ext. Fax: (727) 827-6102
4. Owner/Authorized Representative E-mail Address: <u>Thomas.Lawery@pgnmail.com</u>
5. Owner/Authorized Representative Statement: <i>I, the undersigned, am the owner or authorized representative of the corporation, partnership, or other legal entity submitting this air permit application. To the best of my knowledge, the statements made in this application are true, accurate and complete, and any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department.</i>  _____ Signature 5/2/08 _____ Date

Application Responsible Official Certification

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

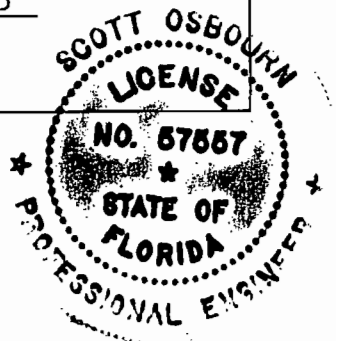
1. Application Responsible Official Name:
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business 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, CAIR source, or Hg Budget source.
3. Application Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
4. Application Responsible Official Telephone Numbers... Telephone: () ext. Fax: ()
5. Application Responsible Official E-mail Address:
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. _____ Signature _____ Date

Professional Engineer Certification

1. Professional Engineer Name: Scott H. Osbourn Registration Number: 57557
2. Professional Engineer Mailing Address... Organization/Firm: Golder Associates Inc.** Street Address: 5100 West Lemon Street, Suite 114 City: Tampa State: FL Zip Code: 33609
3. Professional Engineer Telephone Numbers... Telephone: (813) 287-1717 ext. 53304 Fax: (813) 287-1716
4. Professional Engineer E-mail Address: <u>sosbourn@golder.com</u>
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 checked="" 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 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><i>Scott Osbourn</i></u> Date <u>4/30/08</u> (seal)

* Attach any exception to certification statement.

**Board of Professional Engineers Certificate of Authorization #00001670.



SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

This section of the permit addresses the following emissions unit.

E.U. ID	Emissions Units Comprising Combined Cycle Unit 4 <u>and Simple Cycle Unit 5</u>
038	Unit 4A – One 215 MW (ISO) Combustion Turbine with Duct-fired Heat Recovery Steam Generator
039	Unit 4B – One 215 MW (ISO) Combustion Turbine with Duct-fired Heat Recovery Steam Generator
040	Unit 4C – One 215 MW (ISO) Combustion Turbine with Duct-fired Heat Recovery Steam Generator
041	Unit 4D – One 215 MW (ISO) Combustion Turbine with Duct-fired Heat Recovery Steam Generator
042	Unit 5 – One 195 MW (ISO) Combustion Turbine

APPLICABLE STANDARDS AND REGULATIONS

1. PSD Applicability and BACT Determinations: The Rules for the Prevention of Significant Deterioration (PSD) of Air Quality apply to this project and Best Available Control Technology (BACT) determinations were made for carbon monoxide (CO) and volatile organic compounds (VOC).

See Appendix BD of this permit for a summary of the final BACT determinations.
[Rules 62-210.200 (Definitions) and 62-212.400, F.A.C.]

{Permitting Note: The repowering project does not trigger PSD or require a BACT determination for NO_x, SO₂, sulfuric acid mist or PM/PM₁₀ because emissions reductions from the permanent shutdown of existing fossil fueled steam generating Units 1, 2 and 3 will exceed emissions increases from the project by values greater than the respective significant emissions rates.}

2. NSPS Requirements: Each CT shall comply with all applicable requirements of 40 CFR 60, listed below, adopted by reference in Rule 62-204.800(7)(b), F.A.C.
 - a. Subpart A - General Provisions, including:
 - 40 CFR 60.7, Notification and Record Keeping
 - 40 CFR 60.8, Performance Tests
 - 40 CFR 60.11, Compliance with Standards and Maintenance Requirements
 - 40 CFR 60.12, Circumvention
 - 40 CFR 60.13, Monitoring Requirements
 - 40 CFR 60.19, General Notification and Reporting Requirements
 - b. Subpart KKKK - Standards of Performance for Stationary Combustion Turbines: These provisions were finalized on July 6, 2006 and include requirements applicable to duct burners located in HRSGs.
3. NESHAP Requirements: The CTs are subject to 40 CFR 63, Subpart A - Identification of General Provisions and 40 CFR 63, Subpart YYYY - National Emissions Standard for Hazardous Air Pollutants for Stationary Combustion Turbines.

EQUIPMENT AND CONTROL TECHNOLOGY

4. Combustion Turbines (CTs): The permittee is authorized to install, tune, operate, and maintain five Model SGT6-5000F CT-electrical generator sets. Each CT shall include an automated control system and have dual-fuel capability. Ancillary equipment includes an inlet air filtration system, evaporative inlet air-cooling system and a nominal 120 foot exhaust stack for simple cycle operation.
[Application No. 1030011-010-AC; Design]
5. Heat Recovery Steam Generators (HRSGs): The permittee is authorized to install, operate, and maintain four new duct-fired HRSGs that recover exhaust heat energy from four of the CTs and deliver steam to a nominal 420 MW steam turbine electrical generator. Each HRSG shall be equipped with a nominal 120 foot

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

exhaust stack for combined cycle operation. [Application No. 1030011-010-AC; Design]

6. DLN Combustion: The permittee shall install, operate and maintain Dry Low NO_x (DLN) systems to control NO_x emissions from each CT when firing natural gas. Prior to the initial emissions performance tests required for each CT, the DLN combustors and automated combustion turbine control system shall be tuned without a selective catalytic reduction (SCR) system in operation to achieve the permitted CO, VOC and NO_x levels for simple cycle operation. **For VOCs, while the intent is to tune for compliance with the permit limit, emissions of CO are a representative surrogate. Therefore, VOC monitoring is not required during the tuning process.** Thereafter, each system shall be maintained and tuned in accordance with the manufacturer's recommendations or industry standards.
[Application No. 1030011-010-AC; Design]
7. Water Injection: The permittee shall install, operate, and maintain a water injection system to reduce NO_x emissions from each CT when firing distillate fuel oil. Prior to the initial emissions performance tests, the water injection system shall be tuned without an SCR system in operation to achieve the NO_x value for simple cycle operation. Thereafter, each system shall be maintained and tuned in accordance with the manufacturer's recommendations or industry standards. [Application No. 1030011-010-AC; Design]
8. Selective Catalytic Reduction Systems: The permittee is authorized to install, tune, operate, and maintain a selective catalytic reduction (SCR) system within each HRSG to control NO_x emissions from each of the four CT/Duct-fired HRSGs comprising the combined cycle unit. The SCR system consists of an ammonia (NH₃) injection grid, catalyst, ammonia storage, monitoring and control system, electrical, piping and other ancillary equipment. The SCR system shall be designed, constructed and operated to achieve the permitted levels for NO_x and NH₃ emissions. Operation of the SCR systems is not required when the NO_x emission limits can be met without their use.
[Application No. 1030011-010-AC; Design, and 62-210.650 (Circumvention), F.A.C.]
9. Oxidation Catalyst Systems: The permittee shall design and build the project to facilitate future installation of an oxidation catalyst system within each HRSG to control CO and VOC emissions from each of the four CTs/Duct-fired HRSGs comprising the combined cycle unit. The permittee may install oxidation catalyst during project construction or, after notifying the Department, at a future date as described in Specific Condition 18.f. [Rule 62-4.070(3) F.A.C.]
10. Ammonia Storage: In accordance with 40 CFR 60.130, the storage of ammonia shall comply with all applicable requirements of the Chemical Accident Prevention Provisions in 40 CFR 68.
[Rule 62-4.070 F.A.C.]

PERFORMANCE RESTRICTIONS

11. Authorized Fuels: Each CT shall fire only natural gas and distillate oil. The maximum sulfur content of natural gas shall not exceed 2.0 grains of sulfur per 100 standard cubic feet of natural gas. The maximum sulfur content of distillate oil shall not exceed 0.05% by weight.
[Design; Rules 62-4.070 and 62-210.200 (Definitions - PTE), F.A.C.; 40 CFR 60, Subpart KKKK]
12. Permitted Capacity - Combustion Turbines: The nominal heat input rate excluding steam for power augmentation to each CT is 1,972 MMBtu per hour when firing natural gas and 1,876 MMBtu per hour when firing distillate fuel oil based on a compressor inlet air temperature of 59° F, the higher heating value (HHV) of each fuel, and 100% load. Heat input rates will vary depending upon CT characteristics, ambient conditions, alternate methods of operation, and evaporative cooling. The permittee shall provide manufacturer's performance curves (or equations) that correct for site conditions to the Permitting and Compliance Authorities within 45 days of completing the initial compliance testing. Operating data may be adjusted for the appropriate site conditions in accordance with the performance curves and/or equations on file with the Department. [Rule 62-210.200(Definitions - PTE), F.A.C.]

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

13. Permitted Capacity - Duct Burners: The total nominal heat input rate to the duct burners (DBs) located within each HRSG is 500 MMBtu per hour based on the higher heating value (HHV) of natural gas. Only natural gas shall be fired in the duct burners. [Rule 62-210.200(Definitions - PTE), F.A.C.]

~~14. Temporary Simple Cycle Operation of Two CTs Prior to Permanent Shutdown of Units 1, 2 and 3: The permittee may select any two of the five new CTs to be operated as simple cycle units prior to shutdown of Units 1, 2 and 3. The restrictions included in this condition apply only to those CTs chosen, and only during the described period. Once selected, only those CTs chosen may be operated prior to shutdown of Units 1, 2 and 3 in accordance with the following restrictions:~~

~~a. Restriction on SC Operation:~~

- ~~• The combined operation of the two CTs shall not exceed 1,100 hours.~~
- ~~• A NO_x CEMS shall be installed and operating in each stack prior to startup of the CTs in order to collect and record data for the purpose of demonstrating compliance with this requirement. Notwithstanding the relative accuracy test audit (RATA) grace period described in 40 CFR 75 Appendix B, the NO_x CEMS shall be fully certified in accordance with the requirements of 40 CFR 75 (including a RATA), within 30 operating days but not later than 60 calendar days after startup of the CTs.~~
- ~~• Total emissions of NO_x from the two CTs shall not exceed 39 tons during all operation including startups, shutdowns and malfunctions as measured and recorded by the required NO_x continuous emissions monitoring systems (CEMS) during the temporary period. Data recorded before and after CEMS certification shall be included in the calculation.~~
- ~~• Each CT shall be stack tested to demonstrate initial compliance with the applicable Subpart KKKK NO_x emission standard for each fuel to be fired. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup of each unit. Data collected during the above described RATA may be used to satisfy this 60 day test requirement provided all requirements of 40 CFR 60.8 and Subpart KKKK are met.~~
- ~~• The BACT emissions standards of specific condition 18 do not apply to these CTs prior to Unit 1, 2 and 3 shutdown. Following shutdown of Units 1, 2 and 3 all restrictions of this permit apply, including the BACT limits of specific condition 18.~~

~~b. Restriction on CC Operation: No combined cycle operation of any unit is allowed prior to permanent shutdown of Units 1, 2, and 3.~~

~~c. Monthly Operations Summary: By the 10th calendar day of each month, the permittee shall record the following in a written or electronic log for each CT for the previous month of operation: fuel consumption, hours of operation, NO_x emissions in total tons for the month, and NO_x emissions in total tons for the described restricted period of operation. Information recorded and stored as an electronic file shall be available for inspection and printing within at least three days of a request by the Department. The fuel consumption shall be monitored in accordance with the provisions of 40 CFR 75 Appendix D.~~

~~*[Permitting note: The limitation on total NO_x emissions and adherence to the emissions standards in Specific Conditions 18, 19 and 20 along with the compliance and recordkeeping requirements of this condition will effectively ensure that emissions increases of all PSD pollutants from the selected CTs operated in SC mode prior to Unit 1, 2 and 3 shutdown will be less than their respective Significant Emissions Rates per Rule 62-210.200 (Definitions - SER), F.A.C.]*~~

~~[Rules 62-4.070(3), 62-210.200(PTE) and 62-212.400(12)(PSD Avoidance), F.A.C.; 40 CFR 60.8, and 40 CFR Subpart KKKK]~~

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

- 15-14. Restricted Operation: The permittee shall not exceed the following parameters following shutdown of Units 1, 2 and 3:
- The hours of operation of the CTs are not limited (8,760 hours per year).
 - Distillate oil firing is limited to ~~1,000 hours per CT (i.e. 5,000 hours total aggregate for all five CTs)~~ (based on an average of 1,000 hours per CT) during any consecutive 12-month period.
 - Operation of the DBs is limited to ~~2,434 hours per DB (i.e. 9,736 hours aggregate for four DBs)~~ (based on an average of 2,434 hours per DB) during any consecutive 12-month period.
 - Power (steam) augmentation shall be limited to 6,752 hours aggregate for four CTs (based on an average of 1,688 hours per CT) during any consecutive 12-month period.
 - Other than startup, shutdown, fuel switching or documented malfunction the CTs shall operate above 70% load during simple cycle operation, or the lowest minimum load where compliance is demonstrated during initial compliance testing.
- 16-15. Methods of Operation: Subject to the restrictions and requirements of this permit, the CTs may be commercially available for dispatch operate under the following methods of operation after shutdown of Units 1, 2 and 3
- Simple Cycle (SC) Operation*: All five CTs may operate in simple cycle (SC) mode whereby the turbine exhaust gas (TEG) exits through or is diverted to a stack unassociated with a DB-fired HRSG. This method of operation will be an infrequent occurrence for the four CTs that will typically operate in combined cycle mode as described.
 - Combined Cycle (CC) Operation*: The four CTs associated with combined cycle Unit 4 may operate in combined cycle (CC) mode whereby the TEG is exhausted to their respective duct-fired HRSGs for energy recovery in order to raise steam to drive the single steam turbine-electrical generator (STG) subject to the restrictions of this permit.
 - Inlet Conditioning*: In accordance with the manufacturer's recommendations and appropriate ambient conditions, the evaporative cooling systems may be operated to reduce the compressor inlet air temperature and provide additional direct, shaft-driven electrical power.
 - Duct Firing*: The DB within each HRSG may be fired with natural gas to reheat the TEG in order to provide additional steam to the STG or the CTs for power augmentation.
 - Power augmentation*: Power (Steam) Augmentation (PA): Steam for PA is taken from the HRSG and is introduced into the CT compressor discharge, thus increasing the power produced by the expander portion of the turbine.

[Application; Rules 62-210.200(PTE) and 62-212.400(BACT), F.A.C.]

EMISSIONS STANDARDS

- 17-16. New Source Performance Standards for NO_x: Emissions of NO_x shall not exceed the following emission limits for each CT or CT/DB-fired HRSG determined pursuant to 40 CFR 60, Subpart KKKK.

Pollutant	Fuel	Method of Operation ^a	CEMS ^b Rolling Average ppmvd (uncorrected)
NO _x ^c	Oil	CT (SC)	42 on 4-hour basis
		CT (CC)	42 on 30-operating days basis
	Gas	CT (SC)	15 on 4-hour basis
		CT (CC)	15 on 30-operating days basis

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

		CT & DB	
--	--	---------	--

- a. CT (SC) means operation of CT in simple cycle mode. CT (CC) means operation of CT in combined cycle without use of the DB. CT & DB means operation in combined cycle mode and using the DB.
- b. A CEMS for NO_x shall be installed on the CT stacks and on the HRSG stacks. Correction to 15% O₂ is **required, not allowed** consistent with the provisions of 40 CFR 60, Subpart KKKK.
- c. Compliance with the continuous NO_x standards shall be demonstrated based on data collected by the required CEMS.

Refer to Appendix KKKK of this permit for the full NSPS requirements. [40 CFR 60, Subpart KKKK]

17. **Best Available Control Technology (BACT) Emissions Standards for CO and VOC:** Emissions of VOC and CO shall not exceed the following emission limits for each CT or CT/DB-fired HRSG.

Pollutant	Fuel	Method of Operation ^a	Stack Test, 3-Run Average		CEMS ^c Block Average
			ppmvd @ 15% O ₂	lb/hr ^b	ppmvd @ 15% O ₂
<i>Unit 4 HRSG Stacks</i>					
CO	Oil	CT	8.0	40.4	8.0, 24-hr ^{d,f} 6, 12-month ^f
	Gas	CT	4.1	20.8	
		CT & DB	7.6	38.3	
VOC ^{e,g}	Oil	CT	2.8	7.6	Not Applicable
	Gas	CT	1.2	3.0	
		CT & DB	1.5	3.8	
<i>Unit 5 CT and Unit 4 Bypass Stacks</i>					
CO	Oil	CT	8.0	40.4	Not Applicable
	Gas	CT	4.1	20.8	
VOC ^e	Oil	CT	2.8	7.6	Not Applicable
	Gas	CT	1.2	3.0	

- a. CT means operation of a combustion turbine (CT) in simple cycle or in combined cycle without use of the duct burner (DB). CT & DB means operation in combined cycle mode and using the DB.
- b. The mass emission rate standards are based on a turbine inlet condition of 59° F and may be adjusted to actual test conditions in accordance with the performance curves and/or equations on file with the Department.
- c. CEMS for CO are required only on the HRSG stacks. Other than startup, shutdown, fuel switching or documented malfunction the CT shall operate above 70% **load, or the lowest load at which compliance is demonstrated during initial testing, load** during simple cycle operation.
- d. Compliance with the continuous 24-hour CO standards shall be demonstrated based on data collected by the required CEMS on the HRSG stacks. The initial and annual EPA Method 10 tests associated with the certification of the CEMS instruments may also be used to demonstrate compliance with the individual standards for natural gas, fuel oil, or duct burner modes. Separate CO tests shall be conducted under simple cycle mode on the CT stacks.
- e. Compliance with the VOC standards shall be demonstrated by conducting tests in accordance with EPA Method 25A on the HRSG stacks and, under simple cycle mode, on the CT stacks. Optionally, EPA Method 18 may also be performed to deduct emissions of methane and ethane. The emission standards are based on VOC measured as methane.

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

- f. **Rolling Averages.** Enforcement discretion may be exercised for up to 12 months with respect to the **8 ppmvd and the 6 ppmvd @ 15% O₂ limits** for any CT/Duct-fired HRSG upon notification by the permittee of intent to install oxidation catalyst. The permittee shall have 12 months to complete the oxidation catalyst installation. From time of notification to installation of the catalyst all partial or complete calendar months shall be excluded from the 12-month rolling average.
- g. Compliance with the CO CEMS based limits shall be deemed as compliance with the VOC limit.
[Rule 62-210.200(Definitions – BACT) and 62-212.400 F.A.C.]

~~19-18.~~ **New Source Performance Standard for SO₂:** Pursuant to §60.4330(a)(2), SO₂ emissions are limited in NSPS Subpart KKKK by a prohibition on the firing of any fuels that contain total potential sulfur emissions in excess of 0.060 lb SO₂/MMBtu heat input. **Meeting the fuel sulfur limits in Condition 19.a of this permit will serve to demonstrate compliance with the Subpart KKKK standard for SO₂.** Refer to Appendix KKKK of this permit for the full NSPS requirements. [40 CFR 60, Subpart KKKK]

~~20-19.~~ **Measures to Limit Particulate Emissions (PM/PM₁₀/Fine Particulate Matter):** The following measures and limitations, in conjunction with decreases from other units, effectively limit combined annual PM/PM₁₀ emissions to a level that ensures net emissions increases are well below the significant emission rate at which PSD applies and a subsequent BACT determination is required. These measures also minimize fine particulate emissions and formation:

- a. **Fuel Sulfur Limits:** The sulfur concentration shall be limited to 2 grains per 100 standard cubic feet of natural gas. The sulfur concentration in the distillate fuel oil used shall be limited to 0.05 percent. Compliance with the fuel specifications shall be demonstrated by keeping records of the fuel sulfur content.
- b. **Visible Emissions:** Visible emissions shall not exceed 10 percent opacity for each 6-minute block average. Compliance with the visible emissions standard shall be demonstrated by conducting tests in accordance with EPA Method 9.~~23~~
- c. **Ammonia Emissions (Slip) Limits:** Ammonia emissions shall be limited to 5 ppmvd @ 15% O₂. Compliance with the ammonia slip standard shall be demonstrated by conducting tests in accordance with EPA Methods TM-027 or 320.

[62-212.400(12)(PSD Avoidance)]

EXCESS EMISSIONS

{Permitting Note: The following conditions apply only to the SIP-based emissions standards specified in Condition No. 18 of this section. Rule 62-210.700, F.A.C. (Excess Emissions) cannot vary or supersede any federal provision of the NSPS or Acid Rain programs.}

~~21-20.~~ **Operating Procedures:** The Best Available Control Technology (BACT) determinations established by this permit rely on “good operating practices” to reduce emissions. Therefore, all operators and supervisors shall be properly trained to operate and maintain the CTs, HRSGs, and pollution control systems in accordance with the guidelines and procedures established by each manufacturer. The training shall include good operating practices as well as methods of minimizing excess emissions.
[Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

~~22-21.~~ **Alternate Visible Emissions Standard:** Visible emissions due to startups, shutdowns, and malfunctions shall not exceed 10% opacity except for up to ten, 6-minute averaging periods during a calendar day, which shall not exceed 20% opacity. [Rule 62-212.400(BACT), F.A.C.]

~~23-22.~~ **Definitions**

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

- a. *Startup* is defined as the commencement of operation of any emissions unit which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which result in excess emissions. [Rule 62-210.200(245), F.A.C.]
- b. *Shutdown* is the cessation of the operation of an emissions unit for any purpose. [Rule 62-210.200(230), F.A.C.]
- c. *Malfunction* is defined as any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner. [Rule 62-210.200(159), F.A.C.]

24-23. 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. All such preventable emissions shall be included in any compliance determinations based on CEMS data. [Rule 62-210.700(4), F.A.C.]

25-24. Allowable Data Exclusions: As per the procedures in this condition, limited amounts of CO CEMS emissions data may be excluded from the corresponding SIP-based compliance demonstration, provided that best operational practices to minimize emissions are adhered to and the duration of data excluded is minimized. As provided by the authority in Rule 62-210.700(5), F.A.C., these conditions replace the provisions in Rule 62-210.700(1), F.A.C. For each CT/HRSG system, excess emissions resulting from startup, shutdown, and documented malfunctions shall not exceed two hours in any 24-hour period except for the specific cases listed below. 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.

- a. *Steam Turbine/HRSG System Cold Startup:* For cold startup of the steam turbine system, up to 8 hours of excess emissions from any CT/HRSG system may be excluded in any 24-hour period. A cold "startup of the steam turbine system" is defined as startup of the 4-on-1 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 CT/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. *Shutdown Combined Cycle Operation:* For shutdown of the combined cycle operation, up to 3 hours in any 24-hour period of excess emissions from any CT/HRSG system can be excluded.
- c. *CT/HRSG System Cold Startup:* For cold startup of a CT/HRSG system, up to 4 hours in any 24-hour period can be excluded. "Cold startup of a CT/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. *Simple Cycle CT Startup:* For startup of a CT for the purpose of operation in simple cycle mode, up to 1 hour in any 24-hour period of excess emissions can be excluded.~~

- e-d. *Fuel Switching:* For fuel switching, up to 2 hours in a 24-hour period can be excluded.

26-25. DLN Tuning: CEMS data collected during initial or other major DLN tuning sessions shall be excluded from the CEMS compliance demonstration provided the tuning session is performed in accordance with the manufacturer's specifications. A "major tuning session" would occur after completion of initial construction, a combustor change-out, a major repair or maintenance to a combustor, or other similar circumstances. Prior to performing any major tuning session, the permittee shall provide the Compliance Authority with an advance notice of at least 7 days that details the activity and proposed tuning schedule. The notice may be by telephone, facsimile transmittal, or electronic mail.

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

EMISSIONS PERFORMANCE TESTING

27-26. Test Methods: Any required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
CTM-027 320	Procedure for Collection and Analysis of Ammonia in Stationary Source. {Notes: This is an EPA conditional test method.} The minimum detection limit shall be 1 ppm. Measurement of Vapor Phase Organic and Inorganic Emissions by Extractive Fourier Transform Infrared (FTIR) Spectroscopy
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources {Notes: The method shall be based on a continuous sampling train.}
18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography {Note: EPA Method 18 may be used (optional) concurrently with EPA Method 25A to deduct emissions of methane and ethane from the measured VOC emissions.}
20	Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines
25A	Determination of Volatile Organic Concentrations

No other methods may be used unless prior written approval is received from the Department.
[Rules 62-204.800, F.A.C.; 40 CFR 60, Appendix A]

28-27. Initial Compliance Determinations: Each CT shall be stack tested to demonstrate initial compliance with the emission standards for CO, NO_x, VOC, visible emissions, and ammonia slip. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup of each unit configuration. Each unit shall be tested when firing natural gas, when using the duct burners and when firing distillate fuel oil. Reference method data collected during the required Relative Accuracy Test Audits (RATAs) may be used to demonstrate compliance with the initial CO and NO_x compliance tests. With appropriate flow measurements (or fuel measurements and approved F-factors), CEMS data may be used to demonstrate compliance with the CO **and VOC** mass rate emissions standards. CO and NO_x emissions recorded by the CEMS shall also be reported for each run during tests for visible emissions, VOC and ammonia slip. The Department may require the permittee to conduct additional tests after major replacement or major repair of any air pollution control equipment, such as the SCR catalyst, oxidation catalyst, DLN combustors, etc. [Rule 62-297.310(7)(a)1, F.A.C. and 40 CFR 60.8]

29-28. Continuous Compliance: The permittee shall demonstrate continuous compliance with the 24-hour and 12-month CO emission standards, and the NO_x emissions standards based on data collected by the certified CEMS. Within 45 days of conducting any RATA on a CEMS, the permittee shall submit a report to the Compliance Authority summarizing results of the RATA. Compliance with the CO emission standards also serves as an indicator of efficient fuel combustion and oxidation catalyst operation, which reduces emissions of particulate matter and volatile organic compounds. [Rule 62-212.400 (BACT), F.A.C.]

30-29. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), each CT shall be tested to demonstrate compliance with the emission standards for visible emissions. CO emissions data collected during the required continuous monitor Relative Accuracy Test Audits (RATAs) may be used to demonstrate compliance with the CO standards. Annual testing to determine the ammonia slip shall be

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

conducted while firing the primary fuel. NO_x emissions recorded by the CEMS shall be reported for each ammonia slip test run.

{Permitting Note: After initial compliance with the VOC standards is demonstrated, annual compliance tests for VOC emissions are not required. Compliance with the continuously monitored CO standards shall indicate efficient combustion and low VOC emissions. The Department retains the right to require VOC testing for the reasons such as exceedance of the CO limit or those given in Appendix SC, Special Compliance Tests.}

[Rules 62-212.400, 62-210.200 (243) (BACT), 62-4.070 (3) and 62-297.310(7)(a)4, F.A.C.]

CONTINUOUS MONITORING REQUIREMENTS

~~31.30.~~ CEM Systems: The permittee shall install, calibrate, maintain, and operate continuous emission monitoring systems (CEMS) to measure and record the emissions of CO from the HRSG stacks and NO_x from all stacks in a manner sufficient to demonstrate continuous compliance with the CEMS emission standards of this section. Each monitoring system shall be installed, calibrated, and properly functioning prior to the initial performance tests. Within one working day of discovering emissions in excess of a CO or NO_x standard (and subject to the specified averaging period), the permittee shall notify the Compliance Authority.

- a. *CO Monitors.* The CO monitors shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4 ~~and~~/or 4A within 60 calendar days of achieving permitted capacity as defined in Rule 62-297.310(2), F.A.C., but no later than 180 calendar days after initial startup. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F, and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Compliance Authority. The RATA tests required for the CO monitor shall be performed using EPA Method 10 in Appendix A of 40 CFR 60, ~~and shall be based on a continuous sampling train.~~ The CO monitor span values shall be set appropriately considering the allowable methods of operation and corresponding emission standards.
- b. *NO_x Monitors.* Each NO_x monitor shall be certified, operated, and maintained in accordance with the requirements of 40 CFR 75. Record keeping and reporting shall be conducted pursuant to Subparts F and G in 40 CFR 75. The RATA tests required for the NO_x monitor shall be performed using EPA Method ~~20~~ or 7E in Appendix A of 40 CFR 60.
- c. *Diluent Monitors.* The oxygen (O₂) or carbon dioxide (CO₂) content of the flue gas shall be monitored at the locations where ~~NO_x and CO are~~ monitored to correct the measured emissions rates to 15% oxygen. If a CO₂ monitor is installed, the oxygen content of the flue gas shall be calculated using F-factors that are appropriate for the fuel fired. Each monitor shall comply with the performance and quality assurance requirements of 40 CFR 75.

~~32.31.~~ CEM Data Requirements:

- *Data Collection:* Emissions shall be monitored and recorded at all times including startup, operation, shutdown, and malfunction except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments. The CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over an hour. If the CEMS measures concentration on a wet basis, the CEM system shall include provisions to determine the moisture content of the exhaust gas and an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Alternatively, the owner or operator may develop through manual stack test measurements a curve of moisture contents in the exhaust gas versus load for each allowable fuel, and use these typical values in an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Final results of the CEMS shall be expressed as ppmvd of ~~NO_x and CO corrected to 15% oxygen, and as ppmvd of NO_x (uncorrected).~~ The CEMS shall be used to demonstrate compliance with the CEMS emission standards



RECEIVED

MAY 06 2008

BUREAU OF AIR REGULATION

May 02, 2008

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

**RE: Request for PSD Air Construction Permit Revisions
DEP File No. 1030011-010-AC and PSD-FL-381
P.L. Bartow Power Plant Repowering Project -**

Dear Mr. Linero,

Based on discussions between Progress Energy Florida (PEF) and the Department on April 9, 2008, this letter serves to transmit our air application package for revisions to the above-referenced permit. PEF understands that the revisions requested are administrative in nature and could likely be accomplished by issuance of a letter amendment to the current permit. There are other issues that PEF would like to address, such as the designation of the Bartow Plant site as a major source of hazardous air pollutants; however, the timing would be more appropriate when initial compliance testing is completed and the air construction permit conditions are incorporated into a revised Title V operating permit.

Accordingly, attached are the requested language revisions, as well as a professional engineer certification form and a certification form completed by the facility's responsible official. If you should have any questions regarding this request, please contact either Scott Osbourn, P.E. at (813) 287-1717 or me at (727) 820-5962. Thank you in advance for your timely consideration of this permit revision request.

Sincerely,

A handwritten signature in black ink that reads "Chris Bradley".

Chris Bradley
Senior Environmental Specialist

Enclosure

Cc: Scott Osbourn, P.E., Golder Associates



Department of Environmental Protection

Division of Air Resource Management

RECEIVED

MAY 06 2008

APPLICATION FOR AIR PERMIT - LONG FORM

BUREAU OF AIR REGULATION

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit:

- For any required purpose at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air operation permit;
- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment new source review, or maximum achievable control technology (MACT);
- To assume a restriction on the potential emissions of one or more pollutants to escape a requirement such as PSD review, nonattainment new source review, MACT, or Title V; or
- 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, or renewal Title V air operation permit.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: Florida Power Corporation dba Progress Energy Florida, Inc.	
2. Site Name: Bartow Plant	
3. Facility Identification Number: 1030011	
4. Facility Location... Street Address or Other Locator: 1601 Weedon Island Drive City: St. Petersburg County: Pinellas Zip Code: 33702	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Title V Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Application Contact

1. Application Contact Name: Chris Bradley, Senior Environmental Specialist	
2. Application Contact Mailing Address... Organization/Firm: Progress Energy Florida, Inc. Street Address: PO Box 14042, MAC PEF-903 City: St. Petersburg State: FL Zip Code: 33701	
3. Application Contact Telephone Numbers... Telephone: (727) 820-5962 ext. Fax: (727) 820-5229	
4. Application Contact E-mail Address: chris.bradley@pgnmail.com	

Application Processing Information (DEP Use)

1. Date of Receipt of Application: 5/6/08	3. PSD Number (if applicable): 381A
2. Project Number(s): 1030011 - 012-AC	4. Siting Number (if applicable):

Purpose of Application

This application for air permit is being submitted to obtain: (Check one)

Air Construction Permit

- Air construction permit.
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL).
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL), and separate air construction permit to authorize construction or modification of one or more emissions units covered by the PAL.

Air Operation Permit

- Initial Title V air operation permit.
- Title V air operation permit revision.
- Title V air operation permit renewal.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

**Air Construction Permit and Revised/Renewal Title V Air Operation Permit
(Concurrent Processing)**

- Air construction permit and Title V permit revision, incorporating the proposed project.
- Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

- I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

This application is submitted to request administrative revisions to the current Bartow Repowering air construction permit (Permit No. 1030011-010-AC). The revisions include the removal of an "interim operating mode" that was previously requested, as well as other minor permit hygiene issues. See attached requested permit language (i.e., strikethrough/underline format).

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
	Simple- and Combined Cycle F-Class Combustion Turbine with HRSG Duct Firing	AC1A	
	Simple- and Combined Cycle F-Class Combustion Turbine with HRSG Duct Firing	AC1A	
	Simple- and Combined Cycle F-Class Combustion Turbine with HRSG Duct Firing	AC1A	
	Simple- and Combined Cycle F-Class Combustion Turbine with HRSG Duct Firing	AC1A	
	Auxiliary Boiler	AC1A	
	Fuel Gas Heaters	AC1A	

Application Processing Fee

Check one: Attached - Amount: _____ Not Applicable

Owner/Authorized Representative Statement

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

1. Owner/Authorized Representative Name : Thomas Lawery, Plant Manager
2. Owner/Authorized Representative Mailing Address... Organization/Firm: Progress Energy Florida, Inc. Street Address: 1601 Weedon Island Drive City: St. Petersburg State: FL Zip Code: 33702
3. Owner/Authorized Representative Telephone Numbers... Telephone: (727) 827-6111 ext. Fax: (727) 827-6102
4. Owner/Authorized Representative E-mail Address: <u>Thomas.Lawery@pgnmail.com</u>
5. Owner/Authorized Representative Statement: <i>I, the undersigned, am the owner or authorized representative of the corporation, partnership, or other legal entity submitting this air permit application. To the best of my knowledge, the statements made in this application are true, accurate and complete, and any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department.</i>  Signature  Date

Application Responsible Official Certification

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

1. Application Responsible Official Name:			
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):			
<input 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, CAIR source, or Hg Budget source.			
3. Application Responsible Official Mailing Address...			
Organization/Firm:			
Street Address:			
City:		State:	Zip Code:
4. Application Responsible Official Telephone Numbers...			
Telephone: ()		ext.	Fax: ()
5. Application Responsible Official E-mail Address:			
6. Application Responsible Official Certification:			
<p>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.</p>			
_____		_____	
Signature		Date	

Professional Engineer Certification

1. Professional Engineer Name: **Scott H. Osbourn**

Registration Number: **57557**

2. Professional Engineer Mailing Address...

Organization/Firm: **Golder Associates Inc.****

Street Address: **5100 West Lemon Street, Suite 114**

City: **Tampa**

State: **FL**

Zip Code: **33609**

3. Professional Engineer Telephone Numbers...

Telephone: **(813) 287-1717** ext. **53304** Fax: **(813) 287-1716**

4. Professional Engineer E-mail Address: sosbourn@golder.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 , 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 , 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.

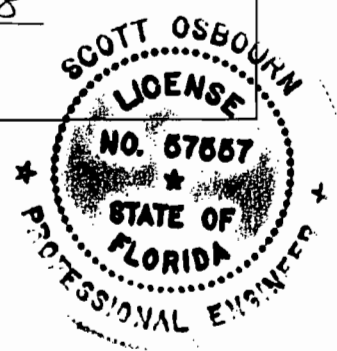
(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here , if so), I further certify that, with the exception of any changes detailed as part of this application, 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.



Signature

4/30/08
Date

(seal)



* Attach any exception to certification statement.

**Board of Professional Engineers Certificate of Authorization #00001670.

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

This section of the permit addresses the following emissions unit.

E.U. ID	Emissions Units Comprising Combined Cycle Unit 4 <u>and Simple Cycle Unit 5</u>
038	Unit 4A – One 215 MW (ISO) Combustion Turbine with Duct-fired Heat Recovery Steam Generator
039	Unit 4B – One 215 MW (ISO) Combustion Turbine with Duct-fired Heat Recovery Steam Generator
040	Unit 4C – One 215 MW (ISO) Combustion Turbine with Duct-fired Heat Recovery Steam Generator
041	Unit 4D – One 215 MW (ISO) Combustion Turbine with Duct-fired Heat Recovery Steam Generator
042	Unit 5 – One 195 MW (ISO) Combustion Turbine

APPLICABLE STANDARDS AND REGULATIONS

1. PSD Applicability and BACT Determinations: The Rules for the Prevention of Significant Deterioration (PSD) of Air Quality apply to this project and Best Available Control Technology (BACT) determinations were made for carbon monoxide (CO) and volatile organic compounds (VOC).

See Appendix BD of this permit for a summary of the final BACT determinations.
 [Rules 62-210.200 (Definitions) and 62-212.400, F.A.C.]

{Permitting Note: The repowering project does not trigger PSD or require a BACT determination for NO_x, SO₂, sulfuric acid mist or PM/PM₁₀ because emissions reductions from the permanent shutdown of existing fossil fueled steam generating Units 1, 2 and 3 will exceed emissions increases from the project by values greater than the respective significant emissions rates.}

2. NSPS Requirements: Each CT shall comply with all applicable requirements of 40 CFR 60, listed below, adopted by reference in Rule 62-204.800(7)(b), F.A.C.
 - a. Subpart A - General Provisions, including:
 - 40 CFR 60.7, Notification and Record Keeping
 - 40 CFR 60.8, Performance Tests
 - 40 CFR 60.11, Compliance with Standards and Maintenance Requirements
 - 40 CFR 60.12, Circumvention
 - 40 CFR 60.13, Monitoring Requirements
 - 40 CFR 60.19, General Notification and Reporting Requirements
 - b. Subpart KKKK - Standards of Performance for Stationary Combustion Turbines: These provisions were finalized on July 6, 2006 and include requirements applicable to duct burners located in HRSGs.
3. NESHAP Requirements: The CTs are subject to 40 CFR 63, Subpart A - Identification of General Provisions and 40 CFR 63, Subpart YYYYY - National Emissions Standard for Hazardous Air Pollutants for Stationary Combustion Turbines.

EQUIPMENT AND CONTROL TECHNOLOGY

4. Combustion Turbines (CTs): The permittee is authorized to install, tune, operate, and maintain five Model SGT6-5000F CT-electrical generator sets. Each CT shall include an automated control system and have dual-fuel capability. Ancillary equipment includes an inlet air filtration system, evaporative inlet air-cooling system and a nominal 120 foot exhaust stack for simple cycle operation.
 [Application No. 1030011-010-AC; Design]
5. Heat Recovery Steam Generators (HRSGs): The permittee is authorized to install, operate, and maintain four new duct-fired HRSGs that recover exhaust heat energy from four of the CTs and deliver steam to a nominal 420 MW steam turbine electrical generator. Each HRSG shall be equipped with a nominal 120 foot

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

exhaust stack for combined cycle operation. [Application No. 1030011-010-AC; Design]

6. DLN Combustion: The permittee shall install, operate and maintain Dry Low NO_x (DLN) systems to control NO_x emissions from each CT when firing natural gas. Prior to the initial emissions performance tests required for each CT, the DLN combustors and automated combustion turbine control system shall be tuned without a selective catalytic reduction (SCR) system in operation to achieve the permitted CO, VOC and NO_x levels for simple cycle operation. For VOCs, while the intent is to tune for compliance with the permit limit, emissions of CO are a representative surrogate. Therefore, VOC monitoring is not required during the tuning process. Thereafter, each system shall be maintained and tuned in accordance with the manufacturer's recommendations or industry standards.
[Application No. 1030011-010-AC; Design]
7. Water Injection: The permittee shall install, operate, and maintain a water injection system to reduce NO_x emissions from each CT when firing distillate fuel oil. Prior to the initial emissions performance tests, the water injection system shall be tuned without an SCR system in operation to achieve the NO_x value for simple cycle operation. Thereafter, each system shall be maintained and tuned in accordance with the manufacturer's recommendations or industry standards. [Application No. 1030011-010-AC; Design]
8. Selective Catalytic Reduction Systems: The permittee is authorized to install, tune, operate, and maintain a selective catalytic reduction (SCR) system within each HRSG to control NO_x emissions from each of the four CT/Duct-fired HRSGs comprising the combined cycle unit. The SCR system consists of an ammonia (NH₃) injection grid, catalyst, ammonia storage, monitoring and control system, electrical, piping and other ancillary equipment. The SCR system shall be designed, constructed and operated to achieve the permitted levels for NO_x and NH₃ emissions. Operation of the SCR systems is not required when the NO_x emission limits can be met without their use.
[Application No. 1030011-010-AC; Design, and 62-210.650 (Circumvention), F.A.C.]
9. Oxidation Catalyst Systems: The permittee shall design and build the project to facilitate future installation of an oxidation catalyst system within each HRSG to control CO and VOC emissions from each of the four CTs/Duct-fired HRSGs comprising the combined cycle unit. The permittee may install oxidation catalyst during project construction or, after notifying the Department, at a future date as described in Specific Condition 18.f. [Rule 62-4.070(3) F.A.C.]
10. Ammonia Storage: In accordance with 40 CFR 60.130, the storage of ammonia shall comply with all applicable requirements of the Chemical Accident Prevention Provisions in 40 CFR 68.
[Rule 62-4.070 F.A.C.]

PERFORMANCE RESTRICTIONS

11. Authorized Fuels: Each CT shall fire only natural gas and distillate oil. The maximum sulfur content of natural gas shall not exceed 2.0 grains of sulfur per 100 standard cubic feet of natural gas. The maximum sulfur content of distillate oil shall not exceed 0.05% by weight.
[Design; Rules 62-4.070 and 62-210.200 (Definitions – PTE), F.A.C.; 40 CFR 60, Subpart KKKK]
12. Permitted Capacity - Combustion Turbines: The nominal heat input rate excluding steam for power augmentation to each CT is 1,972 MMBtu per hour when firing natural gas and 1,876 MMBtu per hour when firing distillate fuel oil based on a compressor inlet air temperature of 59° F, the higher heating value (HHV) of each fuel, and 100% load. Heat input rates will vary depending upon CT characteristics, ambient conditions, alternate methods of operation, and evaporative cooling. The permittee shall provide manufacturer's performance curves (or equations) that correct for site conditions to the Permitting and Compliance Authorities within 45 days of completing the initial compliance testing. Operating data may be adjusted for the appropriate site conditions in accordance with the performance curves and/or equations on file with the Department. [Rule 62-210.200(Definitions - PTE), F.A.C.]

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

13. Permitted Capacity - Duct Burners: The total nominal heat input rate to the duct burners (DBs) located within each HRSG is 500 MMBtu per hour based on the higher heating value (HHV) of natural gas. Only natural gas shall be fired in the duct burners. [Rule 62-210.200(Definitions - PTE), F.A.C.]

~~14. Temporary Simple Cycle Operation of Two CTs Prior to Permanent Shutdown of Units 1, 2 and 3: The permittee may select any two of the five new CTs to be operated as simple cycle units prior to shutdown of Units 1, 2 and 3. The restrictions included in this condition apply only to those CTs chosen, and only during the described period. Once selected, only those CTs chosen may be operated prior to shutdown of Units 1, 2 and 3 in accordance with the following restrictions:~~

~~a. Restriction on SC Operation:~~

- ~~• The combined operation of the two CTs shall not exceed 1,100 hours.~~
- ~~• A NO_x CEMS shall be installed and operating in each stack prior to startup of the CTs in order to collect and record data for the purpose of demonstrating compliance with this requirement. Notwithstanding the relative accuracy test audit (RATA) grace period described in 40 CFR 75 Appendix B, the NO_x CEMS shall be fully certified in accordance with the requirements of 40 CFR 75 (including a RATA), within 30 operating days but not later than 60 calendar days after startup of the CTs.~~
- ~~• Total emissions of NO_x from the two CTs shall not exceed 39 tons during all operation including startups, shutdowns and malfunctions as measured and recorded by the required NO_x continuous emissions monitoring systems (CEMS) during the temporary period. Data recorded before and after CEMS certification shall be included in the calculation.~~
- ~~• Each CT shall be stack tested to demonstrate initial compliance with the applicable Subpart KKKK NO_x emission standard for each fuel to be fired. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup of each unit. Data collected during the above described RATA may be used to satisfy this 60-day test requirement provided all requirements of 40 CFR 60.8 and Subpart KKKK are met.~~
- ~~• The BACT emissions standards of specific condition 18 do not apply to these CTs prior to Unit 1, 2 and 3 shutdown. Following shutdown of Units 1, 2 and 3 all restrictions of this permit apply, including the BACT limits of specific condition 18.~~

~~b. Restriction on CC Operation: No combined cycle operation of any unit is allowed prior to permanent shutdown of Units 1, 2, and 3.~~

~~c. Monthly Operations Summary: By the 10th calendar day of each month, the permittee shall record the following in a written or electronic log for each CT for the previous month of operation: fuel consumption, hours of operation, NO_x emissions in total tons for the month, and NO_x emissions in total tons for the described restricted period of operation. Information recorded and stored as an electronic file shall be available for inspection and printing within at least three days of a request by the Department. The fuel consumption shall be monitored in accordance with the provisions of 40 CFR 75 Appendix D.~~

~~*{Permitting note: The limitation on total NO_x emissions and adherence to the emissions standards in Specific Conditions 18, 19 and 20 along with the compliance and recordkeeping requirements of this condition will effectively ensure that emissions increases of all PSD pollutants from the selected CTs operated in SC mode prior to Unit 1, 2 and 3 shutdown will be less than their respective Significant Emissions Rates per Rule 62-210.200 (Definitions - SER), F.A.C.}*~~

~~[Rules 62-4.070(3), 62-210.200(PTE) and 62-212.400(12)(PSD Avoidance), F.A.C.; 40 CFR 60.8, and 40 CFR Subpart KKKK]~~

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

- 15-14. Restricted Operation: The permittee shall not exceed the following parameters following shutdown of Units 1, 2 and 3:
- a. The hours of operation of the CTs are not limited (8,760 hours per year).
 - b. Distillate oil firing is limited to ~~1,000 hours per CT (i.e. 5,000 hours total aggregate for all five CTs)~~ (based on an average of 1,000 hours per CT) during any consecutive 12-month period.
 - c. Operation of the DBs is limited to ~~2,434 hours per DB (i.e. 9,736 hours aggregate for four DBs)~~ (based on an average of 2,434 hours per DB) during any consecutive 12-month period.
 - d. Power (steam) augmentation shall be limited to ~~6,752 hours aggregate for four CTs (based on an average of 1,688 hours per CT)~~ during any consecutive 12-month period.
 - e. Other than startup, shutdown, fuel switching or documented malfunction the CTs shall operate above 70% load during simple cycle operation, or the lowest minimum load where compliance is demonstrated during initial compliance testing.

- 16-15. Methods of Operation: Subject to the restrictions and requirements of this permit, the CTs may ~~be commercially available for dispatch operate~~ under the following methods of operation after shutdown of Units 1, 2 and 3
- a. *Simple Cycle (SC) Operation*: All five CTs may operate in simple cycle (SC) mode whereby the turbine exhaust gas (TEG) exits through or is diverted to a stack unassociated with a DB-fired HRSG. This method of operation will be an infrequent occurrence for the four CTs that will typically operate in combined cycle mode as described.
 - b. *Combined Cycle (CC) Operation*: The four CTs associated with combined cycle Unit 4 may operate in combined cycle (CC) mode whereby the TEG is exhausted to their respective duct-fired HRSGs for energy recovery in order to raise steam to drive the single steam turbine-electrical generator (STG) subject to the restrictions of this permit.
 - c. *Inlet Conditioning*: In accordance with the manufacturer's recommendations and appropriate ambient conditions, the evaporative cooling systems may be operated to reduce the compressor inlet air temperature and provide additional direct, shaft-driven electrical power.
 - d. *Duct Firing*: The DB within each HRSG may be fired with natural gas to reheat the TEG in order to provide additional steam to the STG or the CTs for power augmentation.
 - e. *Power augmentation*: Power (Steam) Augmentation (PA): Steam for PA is taken from the HRSG and is introduced into the CT compressor discharge, thus increasing the power produced by the expander portion of the turbine.

[Application; Rules 62-210.200(PTE) and 62-212.400(BACT), F.A.C.]

EMISSIONS STANDARDS

- 17-16. New Source Performance Standards for NO_x: Emissions of NO_x shall not exceed the following emission limits for each CT or CT/DB-fired HRSG determined pursuant to 40 CFR 60, Subpart KKKK.

Pollutant	Fuel	Method of Operation ^a	CEMS ^b Rolling Average ppmvd (uncorrected)
NO _x ^c	Oil	CT (SC)	42 on 4-hour basis
		CT (CC)	42 on 30-operating days basis
	Gas	CT (SC)	15 on 4-hour basis
		CT (CC)	15 on 30-operating days basis

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

		CT & DB	
--	--	---------	--

- a. CT (SC) means operation of CT in simple cycle mode. CT (CC) means operation of CT in combined cycle without use of the DB. CT & DB means operation in combined cycle mode and using the DB.
- b. A CEMS for NO_x shall be installed on the CT stacks and on the HRSG stacks. Correction to 15% O₂ is **required, not allowed** consistent with the provisions of 40 CFR 60, Subpart KKKK.
- c. Compliance with the continuous NO_x standards shall be demonstrated based on data collected by the required CEMS.

Refer to Appendix KKKK of this permit for the full NSPS requirements. [40 CFR 60, Subpart KKKK]

18.17. **Best Available Control Technology (BACT) Emissions Standards for CO and VOC:** Emissions of VOC and CO shall not exceed the following emission limits for each CT or CT/DB-fired HRSG.

Pollutant	Fuel	Method of Operation ^a	Stack Test, 3-Run Average		CEMS ^c Block Average
			ppmvd @ 15% O ₂	lb/hr ^b	ppmvd @ 15% O ₂
<i>Unit 4 HRSG Stacks</i>					
CO	Oil	CT	8.0	40.4	8.0, 24-hr ^{d,f} 6, 12-month ^f
	Gas	CT	4.1	20.8	
		CT & DB	7.6	38.3	
VOC ^{e,g}	Oil	CT	2.8	7.6	Not Applicable
	Gas	CT	1.2	3.0	
		CT & DB	1.5	3.8	
<i>Unit 5 CT and Unit 4 Bypass Stacks</i>					
CO	Oil	CT	8.0	40.4	Not Applicable
	Gas	CT	4.1	20.8	
VOC ^e	Oil	CT	2.8	7.6	Not Applicable
	Gas	CT	1.2	3.0	

- a. CT means operation of a combustion turbine (CT) in simple cycle or in combined cycle without use of the duct burner (DB). CT & DB means operation in combined cycle mode and using the DB.
- b. The mass emission rate standards are based on a turbine inlet condition of 59° F and may be adjusted to actual test conditions in accordance with the performance curves and/or equations on file with the Department.
- c. CEMS for CO are required only on the HRSG stacks. Other than startup, shutdown, fuel switching or documented malfunction the CT shall operate above 70% **load, or the lowest load at which compliance is demonstrated during initial testing, load** during simple cycle operation.
- d. Compliance with the continuous 24-hour CO standards shall be demonstrated based on data collected by the *required CEMS on the HRSG stacks. The initial and annual EPA Method 10 tests associated with the certification of the CEMS instruments may also be used to demonstrate compliance with the individual standards for natural gas, fuel oil, or duct burner modes. Separate CO tests shall be conducted under simple cycle mode on the CT stacks.*
- e. Compliance with the VOC standards shall be demonstrated by conducting tests in accordance with EPA Method 25A on the HRSG stacks and, under simple cycle mode, on the CT stacks. Optionally, EPA Method 18 may also be performed to deduct emissions of methane and ethane. The emission standards are based on VOC measured as methane.

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

- f. **Rolling Averages.** Enforcement discretion may be exercised for up to 12 months with respect to the **8 ppmvd and the 6 ppmvd @15% O₂ limits** for any CT/Duct-fired HRSG upon notification by the permittee of intent to install oxidation catalyst. The permittee shall have 12 months to complete the oxidation catalyst installation. From time of notification to installation of the catalyst all partial or complete calendar months shall be excluded from the 12-month rolling average.
- g. Compliance with the CO CEMS based limits shall be deemed as compliance with the VOC limit.
[Rule 62-210.200(Definitions – BACT) and 62-212.400 F.A.C.]

~~19-18.~~ **New Source Performance Standard for SO₂:** Pursuant to §60.4330(a)(2), SO₂ emissions are limited in NSPS Subpart KKKK by a prohibition on the firing of any fuels that contain total potential sulfur emissions in excess of 0.060 lb SO₂/MMBtu heat input. **Meeting the fuel sulfur limits in Condition 19.a of this permit will serve to demonstrate compliance with the Subpart KKKK standard for SO₂.** Refer to Appendix KKKK of this permit for the full NSPS requirements. [40 CFR 60, Subpart KKKK]

~~20-19.~~ **Measures to Limit Particulate Emissions (PM/PM₁₀/Fine Particulate Matter):** The following measures and limitations, in conjunction with decreases from other units, effectively limit combined annual PM/PM₁₀ emissions to a level that ensures net emissions increases are well below the significant emission rate at which PSD applies and a subsequent BACT determination is required. These measures also minimize fine particulate emissions and formation:

- a. **Fuel Sulfur Limits:** The sulfur concentration shall be limited to 2 grains per 100 standard cubic feet of natural gas. The sulfur concentration in the distillate fuel oil used shall be limited to 0.05 percent. Compliance with the fuel specifications shall be demonstrated by keeping records of the fuel sulfur content.
- b. **Visible Emissions:** Visible emissions shall not exceed 10 percent opacity for each 6-minute block average. Compliance with the visible emissions standard shall be demonstrated by conducting tests in accordance with EPA Method 9.~~23~~
- c. **Ammonia Emissions (Slip) Limits:** Ammonia emissions shall be limited to 5 ppmvd @15% O₂. Compliance with the ammonia slip standard shall be demonstrated by conducting tests in accordance with EPA Methods TM-027 or 320.

[62-212.400(12)(PSD Avoidance)]

EXCESS EMISSIONS

{Permitting Note: The following conditions apply only to the SIP-based emissions standards specified in Condition No. 18 of this section. Rule 62-210.700, F.A.C. (Excess Emissions) cannot vary or supersede any federal provision of the NSPS or Acid Rain programs.}

~~21-20.~~ **Operating Procedures:** The Best Available Control Technology (BACT) determinations established by this permit rely on “good operating practices” to reduce emissions. Therefore, all operators and supervisors shall be properly trained to operate and maintain the CTs, HRSGs, and pollution control systems in accordance with the guidelines and procedures established by each manufacturer. The training shall include good operating practices as well as methods of minimizing excess emissions.
[Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

~~22-21.~~ **Alternate Visible Emissions Standard:** Visible emissions due to startups, shutdowns, and malfunctions shall not exceed 10% opacity except for up to ten, 6-minute averaging periods during a calendar day, which shall not exceed 20% opacity. [Rule 62-212.400(BACT), F.A.C.]

~~23-22.~~ **Definitions**

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

- a. *Startup* is defined as the commencement of operation of any emissions unit which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which result in excess emissions. [Rule 62-210.200(245), F.A.C.]
- b. *Shutdown* is the cessation of the operation of an emissions unit for any purpose. [Rule 62-210.200(230), F.A.C.]
- c. *Malfunction* is defined as any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner. [Rule 62-210.200(159), F.A.C.]

24-23. 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. All such preventable emissions shall be included in any compliance determinations based on CEMS data. [Rule 62-210.700(4), F.A.C.]

25-24. Allowable Data Exclusions: As per the procedures in this condition, limited amounts of CO CEMS emissions data may be excluded from the corresponding SIP-based compliance demonstration, provided that best operational practices to minimize emissions are adhered to and the duration of data excluded is minimized. As provided by the authority in Rule 62-210.700(5), F.A.C., these conditions replace the provisions in Rule 62-210.700(1), F.A.C. For each CT/HRSG system, excess emissions resulting from startup, shutdown, and documented malfunctions shall not exceed two hours in any 24-hour period except for the specific cases listed below. 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.

- a. *Steam Turbine/HRSG System Cold Startup:* For cold startup of the steam turbine system, up to 8 hours of excess emissions from any CT/HRSG system may be excluded in any 24-hour period. A cold "startup of the steam turbine system" is defined as startup of the 4-on-1 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 CT/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. *Shutdown Combined Cycle Operation:* For shutdown of the combined cycle operation, up to 3 hours in any 24-hour period of excess emissions from any CT/HRSG system can be excluded.
- c. *CT/HRSG System Cold Startup:* For cold startup of a CT/HRSG system, up to 4 hours in any 24-hour period can be excluded. "Cold startup of a CT/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. *Simple Cycle CT Startup:* For startup of a CT for the purpose of operation in simple cycle mode, up to 1 hour in any 24-hour period of excess emissions can be excluded.~~

- e-d. *Fuel Switching:* For fuel switching, up to 2 hours in a 24-hour period can be excluded.

26-25. DLN Tuning: CEMS data collected during initial or other major DLN tuning sessions shall be excluded from the CEMS compliance demonstration provided the tuning session is performed in accordance with the manufacturer's specifications. A "major tuning session" would occur after completion of initial construction, a combustor change-out, a major repair or maintenance to a combustor, or other similar circumstances. Prior to performing any major tuning session, the permittee shall provide the Compliance Authority with an advance notice of at least 7 days that details the activity and proposed tuning schedule. The notice may be by telephone, facsimile transmittal, or electronic mail.

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

EMISSIONS PERFORMANCE TESTING

27-26. Test Methods: Any required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
CTM-027 320	Procedure for Collection and Analysis of Ammonia in Stationary Source. {Notes: This is an EPA conditional test method.} The minimum detection limit shall be 1 ppm. Measurement of Vapor Phase Organic and Inorganic Emissions by Extractive Fourier Transform Infrared (FTIR) Spectroscopy
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources {Notes: The method shall be based on a continuous sampling train.}
18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography {Note: EPA Method 18 may be used (optional) concurrently with EPA Method 25A to deduct emissions of methane and ethane from the measured VOC emissions.}
20	Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines
25A	Determination of Volatile Organic Concentrations

No other methods may be used unless prior written approval is received from the Department.
[Rules 62-204.800, F.A.C.; 40 CFR 60, Appendix A]

28-27. Initial Compliance Determinations: Each CT shall be stack tested to demonstrate initial compliance with the emission standards for CO, NO_x, VOC, visible emissions, and ammonia slip. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup of each unit configuration. Each unit shall be tested when firing natural gas, when using the duct burners and when firing distillate fuel oil. Reference method data collected during the required Relative Accuracy Test Audits (RATAs) may be used to demonstrate compliance with the initial CO and NO_x compliance tests. With appropriate flow measurements (or fuel measurements and approved F-factors), CEMS data may be used to demonstrate compliance with the CO **and VOC** mass rate emissions standards. CO and NO_x emissions recorded by the CEMS shall also be reported for each run during tests for visible emissions, VOC and ammonia slip. The Department may require the permittee to conduct additional tests after major replacement or major repair of any air pollution control equipment, such as the SCR catalyst, oxidation catalyst, DLN combustors, etc. [Rule 62-297.310(7)(a)1, F.A.C. and 40 CFR 60.8]

29-28. Continuous Compliance: The permittee shall demonstrate continuous compliance with the 24-hour and 12-month CO emission standards, and the NO_x emissions standards based on data collected by the certified CEMS. Within 45 days of conducting any RATA on a CEMS, the permittee shall submit a report to the Compliance Authority summarizing results of the RATA. Compliance with the CO emission standards also serves as an indicator of efficient fuel combustion and oxidation catalyst operation, which reduces emissions of particulate matter and volatile organic compounds. [Rule 62-212.400 (BACT), F.A.C.]

30-29. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), each CT shall be tested to demonstrate compliance with the emission standards for visible emissions. CO emissions data collected during the required continuous monitor Relative Accuracy Test Audits (RATAs) may be used to demonstrate compliance with the CO standards. Annual testing to determine the ammonia slip shall be

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Combined Cycle Unit 4 and Simple Cycle Unit 5 (EU-038, 039, 040, 041 and 042)

conducted while firing the primary fuel. NO_x emissions recorded by the CEMS shall be reported for each ammonia slip test run.

(Permitting Note: After initial compliance with the VOC standards is demonstrated, annual compliance tests for VOC emissions are not required. Compliance with the continuously monitored CO standards shall indicate efficient combustion and low VOC emissions. The Department retains the right to require VOC testing for the reasons such as exceedance of the CO limit or those given in Appendix SC, Special Compliance Tests.)

[Rules 62-212.400, 62-210.200 (243) (BACT), 62-4.070 (3) and 62-297.310(7)(a)4, F.A.C.]

CONTINUOUS MONITORING REQUIREMENTS

31.30. CEM Systems: The permittee shall install, calibrate, maintain, and operate continuous emission monitoring systems (CEMS) to measure and record the emissions of CO from the HRSG stacks and NO_x from all stacks in a manner sufficient to demonstrate continuous compliance with the CEMS emission standards of this section. Each monitoring system shall be installed, calibrated, and properly functioning prior to the initial performance tests. Within one working day of discovering emissions in excess of a CO or NO_x standard (and subject to the specified averaging period), the permittee shall notify the Compliance Authority.

- a. *CO Monitors.* The CO monitors shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4 ~~and~~ or 4A within 60 calendar days of achieving permitted capacity as defined in Rule 62-297.310(2), F.A.C., but no later than 180 calendar days after initial startup. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F, and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Compliance Authority. The RATA tests required for the CO monitor shall be performed using EPA Method 10 in Appendix A of 40 CFR 60, ~~and shall be based on a continuous sampling train.~~ The CO monitor span values shall be set appropriately considering the allowable methods of operation and corresponding emission standards.
- b. *NO_x Monitors.* Each NO_x monitor shall be certified, operated, and maintained in accordance with the requirements of 40 CFR 75. Record keeping and reporting shall be conducted pursuant to Subparts F and G in 40 CFR 75. The RATA tests required for the NO_x monitor shall be performed using EPA Method ~~20~~ or 7E in Appendix A of 40 CFR 60.
- c. *Diluent Monitors.* The oxygen (O₂) or carbon dioxide (CO₂) content of the flue gas shall be monitored at the locations where ~~NO_x and CO are~~ monitored to correct the measured emissions rates to 15% oxygen. If a CO₂ monitor is installed, the oxygen content of the flue gas shall be calculated using F-factors that are appropriate for the fuel fired. Each monitor shall comply with the performance and quality assurance requirements of 40 CFR 75.

32.31. CEM Data Requirements:

- *Data Collection:* Emissions shall be monitored and recorded at all times including startup, operation, shutdown, and malfunction except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments. The CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over an hour. If the CEMS measures concentration on a wet basis, the CEM system shall include provisions to determine the moisture content of the exhaust gas and an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Alternatively, the owner or operator may develop through manual stack test measurements a curve of moisture contents in the exhaust gas versus load for each allowable fuel, and use these typical values in an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Final results of the CEMS shall be expressed as ppmvd of ~~NO_x and CO~~ corrected to 15% oxygen, ~~and as ppmvd of NO_x (uncorrected).~~ The CEMS shall be used to demonstrate compliance with the CEMS emission standards