

Florida Department of Environmental Protection

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

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Mimi A. Drew
Secretary

October 13, 2010

Sent by Electronic Mail – Received Receipt Requested

Mr. Wilson Hicks
Plant Manager
Progress Energy Florida, Inc.
University of Florida Cogeneration Plant
Mowry Building, Building 82
Gainesville, Florida 32611-2295

Re: Project No. 0010001-011-AC
Request for Additional Information (RAI)
University of Florida Cogeneration Plant
Permit Modifications

Dear Mr. Hicks:

On September 14, 2010, the Department received a request for revisions to NO_x and CO emission limits, the elimination of the duct burner emission test requirements, and other permit modifications. Initial construction was authorized under air construction permit PSD-FL-181. The application is incomplete. Based on our review of the proposed project, we have determined that the following additional information is needed in order to continue processing this request. Please provide all assumptions, calculations and reference materials that are used or reflected in any of your responses to the following issues.

1. The application requests a ton per year increase for both NO_x and CO emissions from the combustion turbine. You are stating that the baseline periods and inlet temperature for the turbine should be re-evaluated at the time the existing turbine (48 megawatt (MW) combustion turbine) was permitted under air construction permit 0010001-003-AC. Throughout this emission unit's permitting history, different inlet temperatures have been used for calculating the equivalent pound per hour emission standard. A comparison of the emissions from the original combustion turbine (43 MW) and the replacement/existing turbine at ISO conditions (lower heating value (LHV) of each fuel, 59° F temperature, 60% relative humidity, and 14.7 psia) is needed to further evaluate if the unit was permitted properly as well as provide any ability to adjust the permit standards. All emission limits and TPY caps at the time of the conversion to the larger turbine should be considered in these calculations. Please present the information in tables similar to the following table for both pollutants throughout the facility's permitting history to date.

Pollutant	Permit Number	Year Permit Issued	Permitted ppmvd @ 15% O ₂	Permitted lb/hr limit corrected to 59° F	Capacity in MMBtu/hr	TPY limit corrected to 59° F	CT Emissions Cap	DB Emissions Cap	Facility Emissions Cap	Project Summary
	PSD 181									
	through									
	009-AV									

2. The duct burner has a permitted capacity of 188 MMBtu/hr. Based on the documentation provided and the conversation on October 7, the duct burner has not operated at a rate higher than 119.7 MMBtu/hr since the

REQUEST FOR ADDITIONAL INFORMATION

2001 compliance test. The last documented test on record with the Department is from 2003 at values lower than the 2001 test. Safety issues are the main concern for testing at full capacity and testing issues were addressed in the application. Please provide an engineering report detailing these issues including but not limited to design issues, operation issues, and operating conditions which limit the operation of the duct burner.

3. To show compliance with the annual tons per year limit for CO, how is the facility currently reporting this value? Is it consistent with the method requested in this application?
4. The application has requested several other revisions which are directly associated with the NO_x and CO emissions review. Potential revisions to these air construction permit conditions within the Title V permit will be based upon any revisions to the NO_x and CO emission standards. Additional comments may be forthcoming based upon your response to these comments. Any request for revisions to the Title V permit language not associated with an air construction permit shall be addressed at the time of the next Title V operating permit revision.
5. You requested permit language for the change out of the combustion turbine engine with like/kind replacement as part of the routine maintenance schedule of the unit. The following language is currently incorporated in Florida Gas Transmission's permits for similar types of turbine maintenance. It is the Department's intent to incorporate the same language to accommodate the same type of maintenance for your turbine. Please provide any comments on the language.

Turbine Component Replacement: For the replacement of gas turbine components to facilitate prompt repair and return the unit to its original specifications, the permittee shall comply with the following notification and testing requirements.

- a) Components shall only be replaced with functionally equivalent "like-kind" equipment. Replacement components may consist of improved or newer equipment, but such components shall not change the operation or increase the capacity (heat input and power output rates) of the gas turbine. Replacement components that affect emissions shall be designed to achieve emissions standards specified in all valid air permits and shall achieve these standards or better. After a component replacement, the gas turbine compressor engine remains subject to all valid air permits. [Rule 62-210.200(169), F.A.C.]
- b) The permittee shall notify the Compliance Authority within seven days after beginning any replacement of the gas generator component of the compressor engine. Within seven days of first fire on a replacement gas generator, the permittee shall submit the following information to the Compliance Authority: date of first fire and certification from the vendor that the replacement gas generator is a functionally equivalent "like-kind" component. The vendor certification shall also identify make, model number, maximum heat input rate (MMBtu/hr), power output (bhp) at ISO conditions, and that the permitted emission rates are achievable with the replacement component. This certification may be made by letter, fax, or email. A copy of the information shall be kept on site at the compressor station. Within 60 days of restarting the unit after a gas generator replacement, the permittee shall conduct stack tests to demonstrate compliance with the applicable emission standards. The permittee shall notify the Compliance Authority in writing at least 15 days prior to conducting these tests. The permittee shall comply with all permit requirements for test notification, test methods, test procedures, and reporting. [Rules 62-4.130, 62-160.200(2), (6), and (15), and 62-297.310(7)(b), F.A.C.]
- c) After investigation and for good cause, the Department may require special compliance tests pursuant Rule 62-297.310(7)(b), F.A.C.

To support the gas generator replacement, provide information from the vendor requiring this type of maintenance in lieu of field maintenance. Also, based on past replacements, identify the nature, extent, purpose, frequency, and cost of the associated work. Will costs be greater than 50% of the cost to replace the combustion turbine?

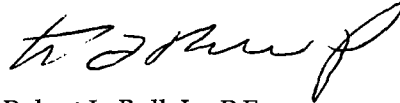
The above information is requested pursuant to the following F.A.C. regulations: Rule 62-4.050 (Procedures to Obtain Permits and Other Authorizations; Applications); 62-4.055 (Permit Processing); 62-4.070 (Standards for Issuing or Denying Permits; Issuance; Denial); 62-4.120 (Construction Permits); 62-204.800 (Federal Regulations

REQUEST FOR ADDITIONAL INFORMATION

Adopted by Reference); 62-212.300 (Permits Required); 62-210.370 (Emissions Computations and Reporting); 62-210.900 (Forms and Instructions); 62-212.300 (General Preconstruction Review); and 62-212.400 (Prevention of Significant Deterioration). All applications for a Department permit must be certified by a professional engineer registered in the State of Florida pursuant to Rule 62-4.050(3), F.A.C. This requirement also applies to responses to Department requests for additional information of an engineering nature. For any material changes to the application, please include a new certification statement by the authorized representative or responsible official.

We will resume processing your application after receipt of the requested information. You are reminded that Rule 62-4.055(1), F.A.C., requires applicants to respond to requests for information within 90 days or to provide a written request for an additional period of time to submit the information. If you have any questions regarding this matter, please contact me at 850/921-7744.

Sincerely,



Robert L. Bull, Jr., P.E.
New Source Review Section
Bureau of Air Regulation

JFK/rlb

This letter was sent to the following people by electronic mail with received receipt requested.

Mr. Wilson Hicks, Progress Energy Florida (wilson.hicks@pgnmail.com)
Mr. Chris Bradley, Progress Energy Florida (chris.bradley@pgnmail.com)
Mr. Dave Meyer, Progress Energy Florida (dave.meyer@pgnmail.com)
Mr. Scott Osbourn, P.E., Golder Associates, Inc. (sosbourn@golder.com)
Ms. Kathleen Forney, U.S. EPA, Region 4 (forney.kathleen@epamail.epa.gov)
Ms. Heather Abrams, U.S. EPA, Region 4 (abrams.heather@epamail.epa.gov)
Ms. Ana Oquendo, U.S. EPA, Region 4 (oquendo.ana@epa.gov)
Ms. Catherine Collins, Fish and Wildlife Service (catherine_collins@fws.gov)
Ms. Vickie Gibson, DEP BAR Reading File (victoria.gibson@dep.state.fl.us)
Mr. Vincent Clark, DEP Northeast District (vincent.clark@dep.state.fl.us)

Livingston, Sylvia

From: Livingston, Sylvia
Sent: Wednesday, October 13, 2010 10:54 AM
To: 'wilson.hicks@pgnmail.com'
Cc: 'chris.bradley@pgnmail.com'; 'dave.meyer@pgnmail.com'; 'sosbourn@golder.com'; 'forney.kathleen@epa.gov'; 'abrams.heather@epa.gov'; 'oquendo.ana@epa.gov'; 'catherine_collins@fws.gov'; Gibson, Victoria; Clark, Vincent; Bull, Robert; Walker, Elizabeth (AIR)
Subject: Request for Additional Information: Progress Energy - University of Florida Cogeneration Plant (0010001-011-AC)
Attachments: RAI 0010001-011-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, *noting that you can view the documents*, 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,

Sylvia Livingston
Division of Air Resource Management (DARM)
Department of Environmental Protection
850/921-9561
sylvia.livingston@dep.state.fl.us

Livingston, Sylvia

From: Meyer, Dave [Dave.Meyer@pgnmail.com]
Sent: Thursday, October 14, 2010 4:58 PM
To: Livingston, Sylvia
Subject: RE: Request for Additional Information: Progress Energy - University of Florida Cogeneration Plant (0010001-011-AC)

Hi Sylvia,

I received the attached document. Thanks very much for all your help, Dave

From: Livingston, Sylvia [mailto:Sylvia.Livingston@dep.state.fl.us]
Sent: Wednesday, October 13, 2010 10:54 AM
To: Hicks Jr, Wilson B
Cc: Bradley, Chris; Meyer, Dave; sosbourn@golder.com; forney.kathleen@epa.gov; abrams.heather@epa.gov; oquendo.ana@epa.gov; catherine_collins@fws.gov; Gibson, Victoria; Clark, Vincent; Bull, Robert; Walker, Elizabeth (AIR)
Subject: Request for Additional Information: Progress Energy - University of Florida Cogeneration Plant (0010001-011-AC)

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, *noting that you can view the documents*, 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,

Sylvia Livingston
Division of Air Resource Management (DARM)
Department of Environmental Protection
850/921-9561
sylvia.livingston@dep.state.fl.us

The Department of Environmental Protection values your feedback as a customer. DEP Secretary Mimi Drew 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: Hicks Jr, Wilson B [Wilson.Hicks@pgnmail.com]
Sent: Thursday, October 14, 2010 11:27 AM
To: Livingston, Sylvia
Subject: RE: Request for Additional Information: Progress Energy - University of Florida Cogeneration Plant (0010001-011-AC)

From: Livingston, Sylvia [mailto:Sylvia.Livingston@dep.state.fl.us]
Sent: Wednesday, October 13, 2010 10:54 AM
To: Hicks Jr, Wilson B
Cc: Bradley, Chris; Meyer, Dave; sosbourn@golder.com; forney.kathleen@epa.gov; abrams.heather@epa.gov; oquendo.ana@epa.gov; catherine_collins@fws.gov; Gibson, Victoria; Clark, Vincent; Bull, Robert; Walker, Elizabeth (AIR)
Subject: Request for Additional Information: Progress Energy - University of Florida Cogeneration Plant (0010001-011-AC)

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, *noting that you can view the documents*, 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,

Sylvia Livingston
Division of Air Resource Management (DARM)
Department of Environmental Protection
850/921-9561
sylvia.livingston@dep.state.fl.us

The Department of Environmental Protection values your feedback as a customer. DEP Secretary Mimi Drew 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.