



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 20, 2008

Electronically Sent - Received Receipt Requested

Mr. James M. Chansler, P.E., D.P.A. ChanJM@jea
Chief Operating Officer
Jacksonville Electric Authority (JEA)
21 West Church Street
Jacksonville, Florida 32202

Re: DEP File No. 0310561-001-AC (PSD-FL-401)
Greenland Energy Center
Nominal 352 megawatt (MW) on gas and 380 MW on oil Peaking Power Plant

Dear Mr. Chansler:

On April 21, 2008 we received your application for an Air Construction Permit pursuant to the Rules for the Prevention of Significant Deterioration (PSD permit) to construct a dual fuel peaking power plant (two simple cycle General Electric 7FA combustion turbines) to be known as Greenland Energy Center site in Duval County.

Pursuant to Rules 62-4.055, and 62-4.070 F.A.C., Permit Processing, the Department requests submittal of the additional information prior to processing the application. Should your response to any of the below items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

Application General Information

1. The use of natural gas (vaporized liquefied natural gas) and ultra low-sulfur fuel oil (ULSFO) has been proposed as BACT for SO₂ for this project. According to the application, two distinct operating scenarios are proposed considering the natural gas availability at the site. Under the first scenario when natural gas is not available, the turbines will fire ULSFO for not more than 1000 hours per year per turbine. Under the second scenario, when natural gas is available, the turbines will fire natural gas for 3000 hours per year per turbine and ULSFO for 500 hours per year per turbine. Please provide the time frame with supporting information from the pipeline vendor for the availability of natural gas in the area and the combustion of natural gas in the turbines.
2. According to the application (Page 2-5) 277 thousand gallons per day (17 hour of operation) per CTG is requested for compliance with regional haze impact thresholds. It appears the consumption of the emergency equipment was not included in this request. Please explain.
3. If possible provide an 8 X 11' photo or drawing of this site.

4. Describe the procedures used for startup and shutdown of this unit to minimize excess emissions.
5. Please supply emissions data for CO and NO_x from the JEA Kennedy Plant for the GE 7FA simple cycle combustion while burning oil and gas. If continuous emissions monitoring data is available, the recent six months data will suffice. If not, please provide the last three years stack test emissions data for CO and NO_x.
6. Complete application information DEP Form 62-210.900(1) for the ancillary equipment. Although these units may be exempted from permitting (based on emissions and capacity), we need to include them in the PSD construction permit as part of the overall project.
7. Does JEA comply with the local program air pollution control regulations? If so, what regulations apply to this project?

Best Available Control Technology (BACT) Analysis

8. According to tests conducted at TECO Polk Power Station, a simple cycle GE 7FA unit achieved between 1 and 3 ppmvd CO at loads between 50 and 100 percent while burning fuel oil. These are very low emissions. We understand that GE will not actually guarantee these low values, but it is worth mentioning this fact in your analysis of CO control costs. We want to have the most accurate possible information in the record.
9. The cost calculation for the carbon monoxide catalyst appears high. The Department obtained lower capital cost estimates from suppliers than submitted by applicants during permitting of several recent projects. The Department believes that even with lower capital cost estimates similar to the ones obtained by the Department, the project will not be cost-effective for the installation of oxidation catalyst. Still, the following points should have been considered in the application:
 - Typically costs are acknowledged for additional fuel use to account loss of any capacity when using catalyst but not the value of lost electric sales.
 - Oxidation catalyst typically lasts much longer than three years. A more realistic lifetime should be assumed rather than just assuming that the catalyst requires replacement after three years.
 - The oxidation catalyst would also reduce volatile organic compounds (VOC) and formaldehyde emissions, which could have been included in the cost effectiveness evaluation.

Future Phase Combined Cycle Operation

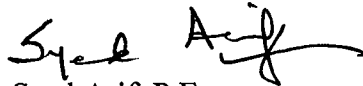
10. Please note that this technical incompleteness review is limited to the simple cycle operation mode. You have requested up to 3500 hours of operation for each simple cycle gas turbine. At this level, it appears that a high-temperature SCR system (NO_x control) and an oxidation catalyst system (CO control) may not be cost effective. However, any permit issued pursuant to this request will include a requirement to operate in simple cycle mode only. In addition, future conversion of any unit to combined cycle operation will invoke the source obligation requirements of Rule 62-212.400(12)(b), F.A.C. and the modification will be reviewed as if

the simple cycle units had never been constructed with a new determination of the Best Available Control Technology for each significant pollutant. Please comment.

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 advise the professional engineer to make sure he/she uses the correct seal in compliance with the applicable requirements of the Florida Board of Professional Engineers. 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."

We will forward any comments from the Northeast District Office, EPA Region IV and the National Park Service as soon as they are received. If you have any questions regarding this matter, please contact Syed Arif (review engineer) at 850/921-9528 or Cleve Holladay (meteorologist) at 850/921-8986.

Sincerely,



Syed Arif, P.E.
New Source Review Section
Bureau of Air Regulation

cc: Gregg Worley, EPA Region 4: worley.gregg@epa.gov
Katy Forney, EPA Region 4: forney.kathleen@epa.gov
Scott Davis, EPA Region 4: davis.scottr@epa.gov
Dee Morse, NPS: dee_morse@nps.gov
Bert Gianazza, PE, JEA: giannb@jea.com
Mike Halpin, DEP Siting Office: mike.halpin@dep.state.fl.us
Richard Robinson, EQD: robinson@coj.net



Florida Department of Environmental Protection

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

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

April 24, 2008

Ms. Katy R. Forney
US EPA Region 4
Air Pollution Control Branch
61 Forsyth Street, SW
Atlanta GA 30303

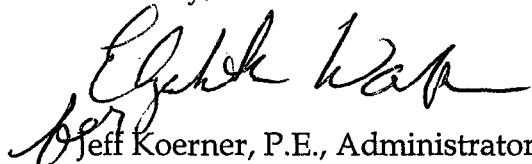
RE: JEA - Greenland Energy Center
0310561-001-AC/PSD-FL-401

Dear Ms. Forney:

Attached is your copy of the JEA - Greenland Energy Center PSD application for your review and comments. This application is being tracked under project number 0310561-001-AC in the Tallahassee Permitting office.

Please email comments or questions on this project to the review engineer, Syed Arif, at syed.arif@dep.state.fl.us or call (850) 488-0114.

Sincerely,


Jeff Koerner, P.E., Administrator
New Source Review Permitting Section

JK/ew

Enclosure

cc: File

Walker, Elizabeth (AIR)

From: Walker, Elizabeth (AIR)
Sent: Tuesday, May 20, 2008 1:01 PM
To: 'chanjm@jea.com'
Cc: 'worley.gregg@epa.gov'; 'Forney.Kathleen@epamail.epa.gov'; 'davis.scottr@epa.gov'; 'dee_morse@nps.gov'; 'giannb@jea.com'; Halpin, Mike; 'Richard Robinson'; Arif, Syed
Subject: Greenland Energy Center.RAI (0310561-001-AC/PSD FL 401)
Attachments: 0310561-001-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

Walker, Elizabeth (AIR)

From: Exchange Administrator
Sent: Tuesday, May 20, 2008 1:01 PM
To: Walker, Elizabeth (AIR)
Subject: Delivery Status Notification (Relay)
Attachments: ATT390229.txt; Greenland Energy Center RAI (0310561-001-AC/PSD FL 401)

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.

chanjm@jea.com

giannb@jea.com

Walker, Elizabeth (AIR)

From: Exchange Administrator
Sent: Tuesday, May 20, 2008 1:01 PM
To: Walker, Elizabeth (AIR)
Subject: Delivery Status Notification (Relay)
Attachments: ATT390170.txt; Greenland Energy Center RAI (0310561-001-AC/PSD FL 401)

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.

Robinson@coj.net

Walker, Elizabeth (AIR)

From: Exchange Administrator
Sent: Tuesday, May 20, 2008 1:01 PM
To: Walker, Elizabeth (AIR)
Subject: Delivery Status Notification (Relay)
Attachments: ATT390149.txt; Greenland Energy Center RAI (0310561-001-AC/PSD FL 401)

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: Walker, Elizabeth (AIR)
Sent: Tuesday, May 20, 2008 1:01 PM
To: 'chanjm@jea.com'
Cc: 'worley.gregg@epa.gov'; 'Forney.Kathleen@epamail.epa.gov'; 'davis.scottr@epa.gov'; 'dee_morse@nps.gov'; 'giannb@jea.com'; Halpin, Mike; 'Richard Robinson'; Arif, Syed
Subject: Greenland Energy Center RAI (0310561-001-AC/PSD FL 401)
Attachments: 0310561-001-AC.pdf

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<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:

Walker, Elizabeth (AIR)

From: Mail Delivery System [MAILER-DAEMON@mseive01.rtp.epa.gov]
Sent: Tuesday, May 20, 2008 1:01 PM
To: Walker, Elizabeth (AIR)
Subject: Successful Mail Delivery Report
Attachments: Delivery report; Message Headers

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@epamail.epa.gov>: delivery via 127.0.0.1[127.0.0.1]:10025: 250
OK, sent 483303D2_2187_1906_27 9C959443F4

Walker, Elizabeth (AIR)

From: Mail Delivery System [MAILER-DAEMON@mseive02.rtp.epa.gov]
Sent: Tuesday, May 20, 2008 1:01 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

<davis.scottr@epa.gov>: delivery via 127.0.0.1[127.0.0.1]:10025: 250 OK, sent
483303D1_21687_257_24 18FF91DC01B

<worley.gregg@epa.gov>: delivery via 127.0.0.1[127.0.0.1]:10025: 250 OK, sent
483303D1_21687_257_24 18FF91DC01B