

Walker, Elizabeth (AIR)

From: Linero, Alvaro
Sent: Wednesday, December 30, 2009 4:23 PM
To: jgordon@amrenewables.com
Cc: jlevine@americanrenewables.com; tdavis@ectinc.com; forney.kathleen@epa.gov; abrams.heather@epa.gov; catherine_collins@fws.gov; Kirts, Christopher; Dalton, Jessica; bettyjohnson@shareinet.net; diandv@bellsouth.net; hopeforcleanwater@yahoo.com; rprtcard@bellsouth.net; Walker, Elizabeth (AIR)
Subject: Gainesville Regional Energy Center PSD Permit Application
Attachments: RAI123009.pdf

Dear Mr. Gordon:

Please read the attached letter as it relates to the air construction (PSD) permit application filed by you for the Gainesville Renewable Energy Center in Gainesville, Alachua County.

We have set up a web link for the project at:

www.dep.state.fl.us/Air/emission/construction/gainesville.htm

If you have any questions, please call me at 850-921-9523 or David Read at 850-414-7268.

Thank you.

alvaro.linero@dep.state.fl.us
Alvaro Linero, P.E., Program Administrator
Bureau of Air Regulation
Special Projects Section
State of Florida DEP
850-921-9523

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.



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

December 30, 2009

Electronically Sent – Received Receipt Requested

jgordon@amrenewables.com

Mr. James S. Gordon, Chief Executive Officer
Gainesville Renewable Energy Center, LLC
75 Arlington Street, 7th Floor
Boston, Massachusetts 02116

Re: Request for Additional Information

DEP File Number: 0010131-001-AC (PSD-FL-411)

100 Megawatt (MW) Biomass-Based Electrical Generating Power Plant

Dear Mr. Gordon:

The Department received your application for an Air Construction Permit on November 30, 2009. The application is to construct a nominal 100 MW Biomass-fueled power plant called the Gainesville Renewable Energy Center (GREC) on land leased from the City of Gainesville at the Deerhaven power plant owned by the Gainesville Regional Utilities (GRU) in Alachua County, Florida.

Pursuant to Rule 62-4.055(1), Florida Administrative Code (F.A.C.), the Department reviewed the application and requests submittal of the following additional information. 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.

1. **Wood Waste Biomass Material:** Please provide a clearer description of the biomass that will be utilized at the GREC facility. For an example of a clearer description of woody biomass, see the draft permit and technical evaluation for the ADAGE LLC project in Hamilton County, Florida. The permit and technical evaluation for the ADAGE project may be found at the following link: www.dep.state.fl.us/Air/emission/construction/adage.htm
[Rule 62-4.070, F.A.C. Reasonable Assurance]
2. **Maximum Heat Input Rate to the Biomass Boiler:** The maximum heat input rate to the boiler stated in the application is 1,358 mmBtu/hr. Is this the absolute maximum heat input rate to the boiler anticipated for this project and, if so, what is the averaging time for the heat input? If this is not the absolute maximum heat input rate, what is the maximum heat input rate and averaging time for the boiler? We note that the Texas permit for the American Renewables project has limit of 1,374 mmBtu/hr on a one month averaging time. The permits issued in Florida generally have much shorter averaging periods (e.g. 4 hours) for heat input and such can be expected for the GREC permit. [Rules 62-4.070 (Reasonable Assurance) and 62-210.200 (Definitions – Potential to Emit), F.A.C.]

3. Biomass Material Handling and Storage Best Management Practices (BMP) Plan: Please provide a BMP plan including a clearer description of the material handling and storage system to insure that biomass materials are taken in and then used on a first-in/first-out basis. Include descriptions of the storage pile management system and reasonable precautions to avoid fugitive emissions, odors and spontaneous combustion such as by minimizing drop distances, misting of material if needed, etc. Also indicate whether dust collectors will be utilized at the drop and transfer points of the fuel handling and storage system.
[Rule 62-4.070, F.A.C. Reasonable Assurance]
4. Biomass Material Handling Equipment: Figure 2-6 of the air permit application provides a schematic of the biomass fuel delivery, unloading and processing system, while Figure 2-7 provides a schematic of the biomass fuel handling and storage system. Based on these schematics, it does not appear that, other than the fully enclosed biomass fuel processing building, that dust collectors are being considered for control of fugitive dust emissions at drop or transfer points. Is this the case and if so why? Also, if available, please provide pictures of biomass handling equipment that is similar to the type proposed for this project.
[Rule 62-4.070, F.A.C. Reasonable Assurance]
5. Biomass Fuel Delivery: It is stated on page 2-8 of the application text that trucks will deliver biomass fuel to the project site 6 days a week and 15 hours a day. Is the daily delivery schedule from 5:00 am to 8:00 pm? Also, is this delivery schedule final or will some flexibility be required. [Rule 62-4.070, F.A.C. Reasonable Assurance]
6. Hazardous Air Pollutants (HAP): The controlled HAP emissions estimates appear to be disproportionately high relative to the size of the facility (in terms of pounds per unit of heat input). Some of the other biomass projects (about half the size of the GREC) estimate HAP emissions about one quarter of the values projected by GREC.
[Rule 62-4.070, F.A.C. Reasonable Assurance]
7. Hydrogen Fluoride (HF): Please provide an estimate of uncontrolled HF emissions based upon a material balance taking into consideration fluoride present in the biomass and sorbents used. Then calculate the HF emissions based on reactions in the bubbling fluidized bed (BFB) boiler, interaction with alkaline fly ash, injected sorbent and collection on fabric filter. Also provide an estimate of inorganic fluoride emissions (besides HF) following control. [Rule 62-4.070, F.A.C. Reasonable Assurance]
8. Case-by-Case Maximum Achievable Control Technology (MACT): Hydrogen chloride (HCl) was proposed as the surrogate (with limits) to account for all inorganic HAP acid gases including HF. Since estimated HF emissions are 71.4 tons per year (TPY) versus 35.7 TPY for HCl, consider focusing on HF removal techniques. Include HF compliance methods.
[Rule 62-204.800(11)(d)2., F.A.C.]
9. Case-by-Case Best Available Control Technology (BACT): The BACT proposal for sulfur dioxide (SO₂) does not include a cost estimate. The rationale given is essentially that control beyond the alkaline properties of the fly ash coupled with some level of sorbent injection would not be cost-effective. Consider the additional benefits for HAP reduction (HF and HCl) provided by increased sorbent injection or wet (or dry) scrubbing in the discussion.
[Rule 62-212.400, F.A.C.]

10. BACT for Carbon Monoxide (CO) and Volatile Organic Compounds (VOC): Please review the conclusion that oxidation catalyst is not feasible. Oxidation catalyst has been proposed for the FB Energy project in Manatee County. Consider whether similar catalyst can also control organic HAP emissions.
[Rules 62-212.400 and 62-204.800(11)(d)2., F.A.C., F.A.C.]
11. SCR Bypass: During the startup, shutdown and malfunction of the BFB-type biomass boiler will there be provisions to bypass the SCR unit? If so, what are the procedures, conditions and timeframes proposed by GREC to bypass the SCR unit?
[Rule 62-4.070, F.A.C. Reasonable Assurance]
12. Biomass Quality Assurance (QA) and Quality Control Plan (QC): Provide a QA and QC plan dealing with biomass acceptance/rejection criteria. For example, some operators provide a very detailed wood fuel quality control plan. Refer for example to the style of one filed (for a different fuel slate) for the Robbins Community Power project in Illinois that was incorporated in the air permit available at:
www.epa.state.il.us/public-notice/2008/robbins-power/draft-permit.pdf
[Rule 62-4.070, F.A.C. Reasonable Assurance]
13. Emission Units and PM Modeling: Please explain why emission units FUG 8, 17, 19, 22, 9, 18, 20, 23, 30 and 31 were not included in the PM₁₀ SIL modeling analysis.
[Rule 62-4.070, F.A.C. Reasonable Assurance]
14. Boundary Control: Since the facility property is leased, please verify that the boundary is fenced and that access is limited to all non-facility personnel.
[Rule 62-4.070, F.A.C. Reasonable Assurance]
15. Air Quality Related Values (AQRV): According to the Modeling Protocol submitted July 2009, the applicant was to "provide this modeling protocol to the U.S. Fish and Wildlife Service (USFWS) and seek guidance regarding the need to conduct Class I area air quality impact analyses for the more distant PSD Class I areas using FLM-recommended screening procedures". Please provide any subsequent guidance received from the USFWS regarding AQRV. Was an AQRV analysis completed? If so, please provide specific information. If not, please discuss why it was not completed.
[Rule 62-4.070, F.A.C. Reasonable Assurance]
16. Quantity Emitted to Distance (Q/D): The Q/D calculation [sum of sulfur dioxide (SO₂), particulate matter less than 10 microns (PM₁₀), nitrogen dioxide (NO₂), and sulfuric acid mist (H₂SO₄) in tons per year (TPY) divided by the distance in kilometers (km) to a Class I area] indicates a value of 9.8 (or effectively 10) at the Okefenokee National Wildlife Area. The value is equal to the Q/D threshold value indicated in the Draft Federal Land Managers AQRV Working Group or FLAG. Any higher value would definitely require an AQRV review. Refer to item 18 below.
17. PM₁₀ Emissions in the Q/D Estimates: PM₁₀ emissions from sources (such as traffic, fugitive emissions, etc) other than the boiler were not included in the Q/D calculation. Please double-check the Draft FLAG documents or consult directly with the USFWS to determine whether the calculation is performed per stack or for the entire project (i.e. PSD Major Stationary Source).

18. Calculation Basis of Q/D: The annual emissions for the Q/D calculations were based on the 30-day averaging times for key pollutants rather than annualized emissions based on the maximum 24-hour emission rates. The 24-hour emission rates would yield Q/D values greater than 10 at more than a single Class I area and possibly require an AQRV review. Please consult the Draft FLAG document or contact the USFWS on this matter.
19. Truck Traffic: Please describe the truck traffic model inputs further. Describe how emission rates were determined for each segment and how other inputs such as release height were determined. [Rule 62-4.070, F.A.C. Reasonable Assurance]

We have not yet received comments from U.S. EPA Region 4 or the USFWS. These will be forwarded to you as soon as received.

The Department will resume processing your application after receipt of the requested information. Rule 62-4.050(3), F.A.C., requires that all applications for a construction 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. For any material changes to the application, please include a new certification statement by the authorized representative or responsible official. Rule 62-4.055(1), F.A.C., also requires applicants to respond to requests for information within 90 days or provide a written request for an additional period of time to submit the information.

If you have any questions, please contact David Read (permit engineer) at 850/414-7268 or me at 850-921-9523.

Sincerely,



A.A. Linero, Program Administrator
Special Projects Section

AAI/dlr

Cc: Joshua H. Levine, American Renewables, LLC: jlevine@americanrenewables.com
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Walker, Elizabeth (AIR)

From: Linero, Alvaro
Sent: Wednesday, December 02, 2009 5:47 PM
To: Ferris, Julie; Kahn, Joseph; Vielhauer, Trina; Kirts, Christopher; Walker, Elizabeth (AIR); Livingston, Sylvia
Subject: FW: Gainesville Renewable Energy Center
Importance: High

We created the web link for the 100 MW Gainesville Renewable Energy Center Air Permit application

www.dep.state.fl.us/Air/emission/construction/gainesville.htm

We have advised members of the public who have in the past specifically asked to be notified about this project. Below is the notification.

Please let me know of any other members of the public that we should notify if not already on the distribution below. Advise your contacts in media, outreach or management if needed so they can refer air inquiries to our site or staff.

Thanks.

Al.

From: Linero, Alvaro
Sent: Wednesday, December 02, 2009 5:34 PM
To: 'rprtcard'; 'Betty Johnson'; 'hopeforcleanwater@yahoo.com'; 'diandv@bellsouth.net'
Subject: Gainesville Renewable Energy Center
Importance: High

On November 30, 2009 we received an application for an Air Permit pursuant to the Rules for the Prevention of Significant Deterioration (PSD permit) from the Gainesville Renewable Energy Center (GREC) – an American Renewables Company.

The application is to construct a 100 megawatts biomass-fueled power plant at the site of the Gainesville Regional Utilities Deerhaven Generation Station.

The site is off of Highway US 441 between Gainesville and Alachua in Alachua County, Florida.

We have posted the application, contact information and other links at the following web address:

www.dep.state.fl.us/Air/emission/construction/gainesville.htm

Please refer to the links provided to other offices or agencies regarding issues such as certification and need.

If you have any questions regarding the air permit application, please contact David Read at 850-414-7268 or me at 850-921-9523.

Thank you.

Alvaro A. Linero, P.E., Administrator
Special Projects Section
Bureau of Air Regulation