NRO-180-12

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
NORTHERN VIRGINIA REGIONAL OFFICE
13901 Crown Court, Woodbridge, Virginia 22193
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Douglas Domenech.
Secretary of Natural Resources

David K. Paylor
Director

Thomas A. Faha
Regional Director

August 7, 2012

Mr. John Andrews II
Managing Member
Green Energy Partners / Stonewall, LLC
Andrews Community Investment Corporation
39100 East Colonial Highway
Hamilton, Virginia 20158

Location: Loudoun County

Registration No.: 73826

Dear Mr. Andrews:

This letter acknowledges receipt of your permit application for Green Energy Partners / Stonewall, LLC, dated May 6, 2010, and amended application dated July 19, 2012. The staff of the Northern Regional Office (NRO) has completed its preliminary review of your Form 7. A nominal 750 MW natural gas-fired combined cycle power generating facility is proposed by the amended application. Based on the staff's initial determination, your facility is subject to the major new source review permitting requirements in 9 VAC 5 Chapter 80, Part II, Articles 8 and 9 and the minor new source review permitting requirements in 9 VAC 5 Chapter 80, Part II, Article 6 of the State Air Pollution Control Board's Regulations for the Control and Abatement of Air Pollution (Regulations).

During the application review process, several issues were noted and are contained in Appendix A of this letter. In addition to the questions in Appendix A, the following items need to be addressed:

- The characterization of the PM2.5 emissions does not appear to include the condensable fraction. The condensable fraction must be included in the total PM2.5 emissions.

- Article 9, 9 VAC 5-80-2120 requires that offsets be obtained prior to operation. DEQ-NRO requires the following steps in addition to the requirements in 9 VAC 5-80-2120:

  - Offsets must be identified prior to a draft permit being issued, and they must be state and federally enforceable before a permit can be issued for the proposed project.

- For VOC and NO_x, the emission offsets must come from sources in the same nonattainment area, or another ozone nonattainment area which must meet the following conditions:

  - Has an equal or higher nonattainment classification than the area in which the source is located, and

  - Emissions from such other area contribute to a violation of the national ambient air quality standard (NAAQS) in the nonattainment area in which the source is located.

- The DEQ requires thirty days to review the modeling prior to releasing a draft permit for review.

- A modeling protocol has been submitted under separate cover and approved with minor comments.

- A permit application fee of $ 7,000.00 is required in order to further review this revised permit application. Applications will not be considered complete if the proper fee is not paid and will not be processed until full payment is received. Please send the attached fee form and a check (or money order) payable to "Treasurer of Virginia" to:

  Department of Environmental Quality
  Receipts Control
  P.O. Box 1104
  Richmond, VA 23218

- A copy of the completed fee form should be submitted to the Department of Environmental Quality (DEQ) Northern Regional Office

Your permit application contains sufficient information to begin the application review process; however, it is important that you provide the information indicated above before the permitting staff can complete the processing of your application. If upon further review it is found that additional information is required to support your permit application, such information will be requested at a later date.

Please note that in accordance with 9 VAC 5-80-1170, 9 VAC 5-80-1775 and 9 VAC 5-80-2070, Green Energy Partners / Stonewall, LLC is required to notify the public about the proposed project and to conduct an informational briefing in the locality where the plant will be constructed. The notice must be approved by the DEQ's NRO and must be published within 30 days of your receipt of this letter. The briefing must be held at least 30 days but no later than 60 days following the day of publication of the notice. The public notice must include, but is not limited to:

- Facility Name;
- Facility Location;
- Type of Source;
- Both combustion turbine models, and the total quantity of each pollutant for both configurations;
- A brief statement of the air quality impact of such pollutants;
- The control technology to be used at the time of the briefing;
- Time & Place of an Information Briefing to inform the public about the application (9 VAC 5-80-1775); and
- The name and telephone number of a contact person, employed by the applicant, who can answer questions about the source.

We are unable to approve the public notice submitted by AECOM on behalf of Green Energy Partners / Stonewall, LLC on July 26, 2012, as we feel that additional information is needed. We will address the additional information required by separate correspondence.

The public briefing will be conducted by Green Energy Partners / Stonewall, LLC and DEQ personnel need to be in attendance, so please coordinate scheduling with this office. If you have any additional questions, please contact me at (703) 583-3931.

Sincerely,

Tom Valentour
Environmental Specialist Sr.

TMV/12180LTR

cc: NPS, Shenandoah National Park
USFS, James River Face Wilderness Area
USFS, Dolly Sods Wilderness Area
USFS, Otter Creek Wilderness Area
US EPA, Regional Administrator, Region III
AECOM, William Campbell

APPENDIX A
DEQ Questions about the July 18, 2012 revised application
Green Energy Partners / Stonewall, LLC
Andrews Community Investment Corporation
P.O. Box 660
Hamilton, Virginia 20158

Loudoun County, VA
Registration No.: 73826

Based on the DEQ's review of your July 18, 2012 application we have the following questions:

1. Please provide a picture, design, or manufacturer's rendition of what the ten cell mechanical draft cooling tower with plume abatement and drift eliminators look like.

2. The condensable fraction must be included in the total PM2.5 emissions and all tables should note that condensibles have been included. Are the PM 2.5 emissions listed in the tables and permit application guaranteed by the manufacturer?

3. Please check the margin of error on the test method for PM-2.5 emissions, and substantiate the accuracy of the emissions calculations at 97.2 tpy for the GE CT, and 98.2 tpy of the Siemens CT, and distinguish between filterable and condensibles in the PM-10 and PM-2.5 emissions.

4. All tables in sections 1.0 through 4.0 shall have emission parameters in the same order. Table 3.14 and 3.16 are different.

5. Why is the total NOx annual emissions in Tables 3.1 and 3.5 different from what the total would be if you double the number in Table 3.4?

6. Why is the total CO in Table 3.4 and 3.5 different from Table 3.1?

7. Why does Table 2-5 in the modeling protocol differ from all other tables for the GE CT's in the application?

8. Why is the total Annual NOx in Table 3.10 significantly less than the total NOx in Tables 3.7 and 3.11?

9. Why is the CO total in Table 3.7 significantly less than the total in Tables 3.10 and 3.11?

10. Why is the VOC total in Table 3.7 significantly less than the total in Tables 3.10 and 3.11?

11. Why is the CO total for the modeling protocol Table 2-6 three times the value in Table 3.10 and 3.11, and four times that of Table 3.7?

12. Why are the number of hot-warm-cold starts different between the GE and Siemens CT's?

13. Provide the PM-10, PM-2.5 and SO2 emissions during start up and shut down in a lb/hr basis.

14. Why are the tons per year of hexane for the Siemens CTs about half the value of the tons per year for hexane in the GE CTs?

15. Section 4.2.7.3 talks about energy efficiency and refers to heat necessary to generate 1 kWh, please provide comparison numbers for coal and oil. Also provide tons of CO2e per kWh for natural gas from this facility as well as coal and oil.

16. What operational issues are expected as a result of "periodic burner tuning"?

17. Section 2.1.9 mentions using pipeline quality natural gas that is un-odorized. Is this available, and does it comply with all OSHA or Health and Safety requirements?

18. Please validate, or calculate sulfur emissions of the natural gas based on mercaptains being injected.

19. Please supply a statement from the natural gas provider certifying the average and maximum sulfur content including naturally occurring sulfur and any sulfur compounds.

20. The conclusion of Section 4.2.7.2 states that carbon capture and storage (CCS) of CO2 and CO2e is technically and economically infeasible and would cost more than $ 100 per ton, however, there was no cost or economic analysis provided to justify this conclusion. EPA considers CCS to be both commercially available and technically feasible for large carbon dioxide emitting sources. Please revise the BACT analysis to include an evaluation of the costs and other impacts of operating a CCS system including a CO2 pipeline.

21. The diesel fired engine generator set is listed in several places as a 2.8 MW unit rated at 2,088 brake horsepower. Please check the ratings since the bhp should be higher for that MW output.

22. Why was the BACT for the diesel engine generator set performed on a 2.2 MW unit when it is referenced as a 2.8 MW unit?

23. Please go into more detail that the fire pump and emergency engine generator set meet State BACT of 6 grams/hp-hr at 90 percent load.

24. Extrapolated costs for the emergency diesel engine generator set for subsection 1(a) in Table 4.8 is not acceptable, please provide a cost estimate from your vendor.

25. Section 4.5 requests 100 hours of runtime for maintenance for the engine generator set, and 500 hours per year of "emergency" operation. Combined this is 600 hours/year, which is greater than the definition of emergency operation of 500 hours/year. Please clarify if you intent is to operate less than 500 hours/yr, or more.