UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS TX 75202-2733

MAY 13 2013

Mr. Stephen Naeve
Chief Operating Officer
APEX Matagorda Energy Center, LLC
3200 Southwest Freeway, Suite 2210
Houston, TX 77027

RE: Application Completeness Determination for APEX Matagorda Energy Center, LLC
Greenhouse Gas Prevention of Significant Deterioration Permit
Clemville, Matagorda County, Texas

Dear Mr. Naeve:

This letter is in response to your application received by this office on November 27, 2012, for a Greenhouse Gas (GHG) Prevention of Significant Deterioration (PSD) permit. After our initial review of the application and supporting information, we have determined that this application is incomplete based on the requirements of 40 CFR Part 124 and additional information is required to begin the processing of the application. Enclosed is a list of the information required (see Enclosure). Please notify us if a complete response is not possible by May 22, 2013.

The requested information is necessary for the United States Environmental Protection Agency (EPA) to develop a Statement of Basis and Rationale for the terms and conditions for any proposed permit. As we develop our preliminary determination, it may be necessary for the EPA to request additional clarifying or supporting information. If the supporting information substantially changes the original scope of the permit application, an amendment or new application may be required.

The EPA may not issue a final permit without determining that: 1) there will be no effects on threatened or endangered species or their designated critical habitat, or 2) until it has completed consultation under Section 7(a)(2) of the Endangered Species Act (ESA) (16 USC § 1536). In addition, the EPA must undergo consultation pursuant to Section 106 of the National Historic Preservation Act (NHPA) (16 USC § 470f). As a reminder, the NHPA implementing regulations require that EPA provide information to the public with an opportunity for participation in the Section 106 process. 36 CFR § 800.2(d). We appreciate your February 2013 submittal of the ESA and the NHPA related documents that will assist in the timely completion of these requirements.

If you have any questions concerning the review of your application, please contact Brad Toups of my staff at (214) 665-7258.

Sincerely,

Wren Stenger
Director
Multimedia Planning and
Permitting Division

ENCLOSURE

The EPA Completeness Comments
APEX Matagorda Energy Center, LLC at Clemville, Matagorda County, Texas
Application for Greenhouse Gas Prevention of Significant Deterioration Permit

1. Natural gas fuel. You indicate that the fuel used in the combustion devices is to be pipeline quality natural gas and characterize that gas based on Florida gas pipeline analysis provided in your application. However, you do not indicate the frequency of subsequent analyses. Please clarify. You also indicate on page 2-6 that you will measure mass air and fuel flows, but do not elaborate on the number or location of the mass flow measuring devices for the turbines or whether the emergency generator will have a fuel and operating hour meter. Also, will the site employ a natural gas fuel heater or compressors to prepare fuel for firing? If so, please provide the associated heater related emissions and efficiencies. Please supplement your application with such detail.

2. The total quantity of natural gas used for the combustion turbines is limited to 7,870,409 MMBtu/yr for the combined turbine trains operating 8760 days per year. How often do you propose to calculate usage rates per train and per site? Hourly? Daily? Please clarify.

3. Expansion/combustion turbines. What are the proposed monitoring requirements for the expansion and combustion turbines' operating parameters, particularly over the low end of the operating range (10-60% of full range)? Will the turbines ever operate solely on compressed air, or solely on the hot exhaust stream generated by natural gas combustion with little or no supplemental compressed air, that is, in effectively simple cycle combustion turbine mode? If so, what will be the expected duration and efficiency in those modes? How will the air/fuel ratio be assured during operation of the combustion turbine or expansion turbines, e.g., alarms, alerts, and/or continuous monitoring? Will continuous O_2 or CO_2 emissions analyzers and exhaust gas flow rate analyzers be utilized? What will be the target ratio? Please provide more details of what operating parameters and or stack emissions and flowrates you are proposing to monitor (and quality assure) to ensure good combustion and to assure compliance with efficiency and emissions limitations.

   Finally, please explain the applicability of the federal rules 40 CFR Part 75 (Acid Rain) and NSPS (proposed Subpart TTTT- Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units, and Subpart KKKK—Standards of Performance for Stationary Combustion Turbines) to this proposed site. If the source is subject to any of these federal rules, please explain how compliance with those rules will be assured and how assurance of compliance with any of those rules will affect your compliance with the GHG emissions limitations, including efficiency measures, you are anticipating for this permit. Will you be continuously monitoring combustion turbine stack CO_2 emissions for any of these federal rules or for your state preconstruction permits? If so, how will your monitoring for those rules or permits affect your choice of monitoring to assure compliance with the GHG emissions limitations and efficiency measures proposed here?

4. Turbine efficiency measures. You suggest a single efficiency measure of 558 lb CO_2/MWh to address all operating modes. Please provide estimates of efficiency during startup/shutdown and while operating the expansion turbines solely on compressed air or solely as in simple cycle combustion mode, if these are possible operating scenarios. In addition, please describe how the parasitic costs of filling the storage cavern are taken into consideration in the efficiency measures and calculations.

5. Heat recuperator efficiency. What are the proposed monitoring requirements to ensure the claimed efficiency for the recuperator is being met? What instrumentation or controls will alert on-site personnel to problems?

6. You propose a natural gas generator for emergency use. The generator will operate during emergencies for backup power generation. How will fuel use and operating hours be tracked and compliance demonstrated for the GHG emissions measures and emissions limitations?

7. Equipment component fugitive natural gas leak estimates. You propose as best available control technology (BACT) for controlling fugitive emissions (leaks) from equipment components in volatile organic compound (VOC) and GHG service a monthly auditory, visual, and olfactory (AVO) monitoring program that includes repair attempts when leaking components are discovered. You selected this type of program over an instrument based directed maintenance program employing Reference Method 21 even though such a program would result in improved control efficiency. You based your decision on a reference to a vendor estimate of the cost of implementing a Method 21 directed maintenance program, rejecting it as too costly. Please provide the vendor estimates you based your decision on. Please identify how your proposed AVO inspection program will be used to identify leaks when there is no indication in your application that the pipeline quality natural gas to be used is required to be odorized. In addition, you base your component leak estimates on a referenced TCEQ document, but you do not indicate how the conditions compare to those found at a typical gas processing plant. Your natural gas use is essentially fuel gas use, but you do not indicate the operating pressure of the components, or whether additional fuel gas compression will be necessary to charge the turbines. Please explain and clarify. In addition, how will you will calculate the emissions for any component found to be leaking but placed on a delay of repair list, and further, how will you assure that any found leaks have been repaired, that is, no longer leak?