

US EPA ARCHIVE DOCUMENT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

NOV 27 2012

Mr. Jason Miller
Plant Manager, Bayport Complex
Air Liquide Large Industries U.S., L.P.
11777 Bay Area Blvd.
Pasadena, TX 77507

RE: Application Completeness Determination for Air Liquide
Greenhouse Gas Prevention of Significant Deterioration Permit
Bayou Cogeneration Plant

Dear Mr. Miller:

The EPA has reviewed your Prevention of Significant Deterioration (PSD) permit application for Air Liquide Bayou Cogeneration Plant that was received by the EPA on September 18, 2012, including supporting documentation, and determined that your application is incomplete at this time. A list of the information needed from you so that the EPA can continue its completeness review is enclosed (see Enclosure). Please notify us if a complete response is not possible by January 4, 2013.

The requested information is necessary for 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 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 (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, 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 look forward to receiving the Biological Assessment and Cultural Resources Reports that you have agreed to prepare for EPA for our use in complying with these statutes.

ENCLOSURE
EPA Completeness Comments
Air Liquide
Application for Greenhouse Gas Prevention of Significant Deterioration Permit
Bayou Cogeneration Facility

1. Please provide supplemental data to the process flow diagram to identify all pieces of equipment and the GHG emission sources with associated emission point numbers (EPN).
2. On page 17 of the permit application the “High Efficiency Turbines” section of the BACT for combustion turbines provides information on the selected turbines. The applicant should provide comparative benchmark information indicating other similar industry operating or designed units and compare the design efficiency of this process to other similar or alike processes. The applicant should then use this information to rank the available control technologies. A comparison of equipment energy efficiencies is necessary to evaluate the energy efficiency of the proposed equipment and possible control technologies. This information should also detail the basis for your BACT proposal in determining BACT limits for the emission units for which these technologies are applied in Step 5 of the BACT analysis. Did Air Liquide review the BACT determinations for recently issued GHG PSD Permits within EPA Region 6, and elsewhere? EPA Region 6 has issued GHG PSD permits to Lower Colorado River Authority (LCRA), Calpine Deer Park, and Calpine Channel Energy Center all of which have combustion turbines. All these facilities have a combustion turbine thermal efficiency that is better than what is proposed for Air Liquide. Please provide additional information to substantiate the proposed efficiency for the GE 7EA units. What recordkeeping requirements are you proposing? What will alert on-site personnel to problems?
3. The application provides a five-step BACT analysis for Carbon Capture and Sequestration (CCS) and concludes that the use of this technology is technically infeasible. A general cost analysis is provided. Please supplement the 5-step top down BACT analysis by supporting your cost analysis on equipment design including any conclusions on a cost per pound of CO₂e removed basis, total annualized costs, and cost effectiveness for implementing CCS control technology for this project, safety or environmental concerns and any associated energy penalty that may result from the implementation of this add-on control and supports its elimination from your BACT consideration. Also, we are requesting a comparison of the cost of CCS to the current project’s annualized cost.