

US EPA ARCHIVE DOCUMENT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

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

Mr. Charles R. Hausmann
Port Director
Calhoun Port Authority
P.O. Box 397
Point Comfort, TX 77978

AUG 23 2012

RE: Application Completeness Determination for Calhoun Port Authority (CPA)
Greenhouse Gas Prevention of Significant Deterioration Permit
ES Joslin Power Station, Point Comfort, Texas

Dear Mr. Hausmann:

This letter is in response to your application received by this office on June 20, 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 124 and additional information is required to begin the processing of the application. Enclosed is a list of the information required (see Enclosure).

Upon receipt of the additional information, the Environmental Protection Agency (EPA) will prepare a completeness determination. The requested information is necessary for EPA to develop a Statement of Basis and Rationale for the terms and conditions for the requisite 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.

Although not required as a part of our completeness determination, the EPA may not issue a final permit without determining that there will be no effects on endangered species or until it has completed consultation under Section 7 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 (16 USC 470f). To expedite these consultations, the EPA requests that permit applicants provide a Biological Assessment and a cultural resources report covering the project and action area.

If you have any questions concerning the review of your application, please contact Melanie Magee of my staff at (214) 665-7161.

Sincerely yours,



Carl E. Edlund, P.E.
Director
Multimedia Planning and
Permitting Division

Enclosure

cc: Mr. Mike Wilson, P.E.
Director, Air Permits Division
Texas Commission on Environmental Quality

ENCLOSURE

EPA Completeness Comments **Calhoun Port Authority – ES Joslin Power Station, Point Comfort, Texas** **Application for Greenhouse Gas Prevention of Significant Deterioration Permit**

1. Being mindful of EPA's PSD and Title V Permitting Guidance for GHG dated March, 2011 on page 17, which states the following:

“The CAA and corresponding implementing regulations require that a permitting authority conduct a BACT analysis on a case-by-case basis, and the permitting authority must evaluate the amount of emissions reductions that each available emissions-reducing technology or technique would achieve, as well as the energy, environmental, economic and other costs associated with each technology or technique. Based on this assessment, the permitting authority must establish a numeric emissions limitation that reflects the maximum degree of reduction achievable for each pollutant subject to BACT through the application of the selected technology or technique. However, if the permitting authority determines that technical or economic limitations on the application of a measurement methodology would make a numerical emissions standard infeasible for one or more pollutants, it may establish design, equipment, work practices or operational standards to satisfy the BACT requirement.”

In addition to the proposed BTU/kWh emission limit provided in the permit application, please propose an output based emission limitation or efficiency based limits for all PSD emission sources (e.g., lb or ton CO₂/MWh). Please provide an analysis that substantiates any reasons for infeasibility of a numerical emission limitation. For the emission sources where numerical emission limitations are infeasible, please propose an operating work practice standard that can be practically enforceable.

2. Please provide supplemental benchmark data that compares the energy efficiency of the selected GE 7FA gas turbine to similar or existing sources. Were other CTG/HSRG units considered for the purposed project from an energy efficiency/emission perspective? Please supplement the current BACT analysis to include the evaluation performed to determine selection. Please include comparative design data that includes heat load and efficiency data of the other CTG/HSRG's that were considered in addition to the one that was selected. (This information can be graphically represented). At what heat load will the combined cycle units operate? Please provide rationale that supports operating at the proposed heat load is energy efficient as BACT.
3. Please provide supplemental data on the process flow diagram that includes all GHG emission sources with corresponding emission source numbers (EPNs), i.e., fugitive emissions, emergency engines, etc.
4. What are the proposed recordkeeping requirements for the combustion turbines operating parameters? How will the air/fuel ratio be assured during operation of the combustion turbine, i.e., alarms, alerts, continuous monitoring, etc? Will O₂ or CO₂ analyzers be utilized? What will be the target ratio? Please provide more details of what operating parameters will be monitored

to ensure good combustion. What is the company's proposed compliance monitoring methodology? Please provide comparative benchmark data of the proposed combustion turbine with existing or similar combustion turbines in GHG per pound of exhaust gas.

5. Beginning on page 7 of 11 of the permit application, the cost estimates provided for the Carbon Capture and Storage (CCS) appear to rely on the August 2010 report entitled "Report of the Interagency Task Force on Carbon Capture and Storage." BACT is a case-by-case determination. Please provide site-specific facility data to evaluate and eliminate CCS from consideration. This material should contain detailed information on the quantity and concentration of CO₂ that is in the waste stream and the equipment for capture, storage and transportation. Please include cost of construction, operation and maintenance, cost per pound of CO₂ removed by the technologies evaluated and include the feasibility and cost analysis for storage or transportation for these options. Please discuss in detail any site specific safety or environmental impacts associated with such a removal system.
 6. It is not clear from the permit application if GHG Maintenance, Startup and Shutdown (MSS) emissions are included in the Carbon Dioxide Equivalent GHG Emissions Summary presented in the table on page 1 of 1. Please provide supplemental data that includes these emission rates.
 7. EPA notes that a 5-step BACT analysis was not included for the "Fugitive Area". A process description of the "Fugitive Area" is on page 4 of 4 of the permit application and also emission calculations. Please provide supplemental data 5-step BACT analysis for fugitives. Please include all TCEQ LDAR programs considered for this project, what was the basis for elimination and selection of the programs as part of your 5-step BACT analysis.
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