

US EPA ARCHIVE DOCUMENT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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

OCT 28 2011

Mr. Patrick Blanchard
Director, EHS
Deer Park Energy Center LLC
717 Texas, Suite 1000
Houston, TX 77002

Subject: Deer Park Energy Center LLC, Application for a Greenhouse Gas Prevention of Significant Deterioration Permit

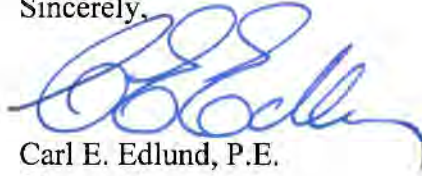
Dear Mr. Blanchard:

This letter is in response to your application dated September 1, 2011 for a Prevention of Significant Deterioration (PSD) permit for Greenhouse Gas (GHG) emissions. After our initial review of the above application and all supporting information, we have determined that additional information is required to begin the processing of the application. Enclosed is a list of the information required. This information is necessary for EPA to develop a Statement of Basis and rationale for the terms and conditions for a draft permit. The next step is for the Environmental Protection Agency (EPA) to develop a completeness determination on the administrative and technical information of your application. It is also possible that after developing our completeness 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.

Under Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, and Executive Order 12898 (59 FR 7629 (Feb. 16, 1994)), EPA has a responsibility to ensure that any action authorized or permitted by EPA will not adversely impact federally listed endangered species, historic areas, and disproportionately impact minority or low income populations, respectively. In order for EPA to carry out these responsibilities, EPA requests your assistance by developing and providing a Biological Assessment and Cultural Resources Survey for our review of your projects activities.

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

Sincerely,



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

cc: Mr. Mike Wilson, P.E., Director
Air Permits Division, TCEQ
Mr. Steve Hagle, P.E., Deputy Director
Office of Air, TCEQ

ENCLOSURE

EPA Completeness Comments on the Deer Park Energy Center, LLC Greenhouse Gas Permit Application Dated September 1, 2011

1. Within footnote 1 of Table 3-1, entitled *Annual GHG Emission Calculations – New Combined Cycle Combustion Turbine Deer Park Energy Center LLC*, the annual firing rate information is noted to be contained in the TCEQ PSD permit application. Please provide a copy of the TCEQ PSD permit application and any subsequent correspondence that may be relevant to the GHG permit application, if any. Additionally, please provide specific detailed calculations to support the Annual Heat Input factor (i.e., seasonal averages and base load percentages)
2. Within footnotes 3 and 4 of Table 3-3, entitled *GHG Emission Calculations – Natural Gas Piping*, and Table 3-4, entitled *Gaseous Fuel Venting During Turbine Shutdown/Maintenance and Small Equipment and Fugitive Component Repair/Replacement*, the CO₂ and CH₄ emissions appear to be based on a specific natural gas analysis. Please provide a copy of the data and/or analysis to support the use of the emission factor. Is the sample data representative of the natural gas composition throughout the operation of this facility?
3. The permit application provides an explanation of why Carbon Capture and Sequestration (CCS) was determined to not be technically feasible. Within Section 5.1.2.1, it is noted that the amine absorption technology for CO₂ capture is not yet commercially available for power plant gas turbine exhausts. The statement appears to rely upon an August 2010 report entitled “Report of the Interagency Task Force on Carbon Capture and Storage.” Please provide any additional information that was used to support this analysis, i.e., vendor(s) statement.
4. Please provide a basis and documentation to support the base heat rate compliance margins listed on page 40 of the permit application.
5. The efficiency is noted to range from 30%-50% (HHV). Please provide an efficiency and loading curve and other benchmarking data for the new turbine that supports describing the unit as the “current state-of-the-art” electrical generating equipment.
6. The existing facility consists of 4 Siemens 501F CTG/HRSG trains, one STG and associated ancillary equipment. With this application the facility is expanding to add a fifth natural gas-fired unit rated at 180 MW (nominal), and a duct burner-fired HRSG. The facility is located in a nonattainment area and the permit application will be reviewed for nonattainment NSR. The determination whether a significant change is a major modification is defined in Part 52.21 and the March 2011 *PSD and Title V Permitting Guidance for Greenhouse Gases*. A major modification occurs when the “net emission increase”, as in 40 CFR 52.21(b)(3)(i), is significant for GHG and is comprised of a sitewide two step analyses: Step 1 of the applicability analysis considers only the emissions increases from the proposed modification itself. Step 2 of the applicability analysis, which is often referred to as “contemporaneous netting,” considers all creditable emissions increases and decreases. Please provide a Step 2 analysis as detailed in the GHG permitting guidance document.