CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512

April 3, 2008

Mr. Arthur Carbonell
Associate Air Pollution Control Engineer
San Diego Air Pollution Control District
10124 Old Grove Road
San Diego, California 92131

Re: Comments on Preliminary Determination of Compliance (PDOC)
Chula Vista Energy Upgrade Project (07-AFC-4)

Dear Mr. Carbonell,

Staff has reviewed the PDOC and has the following comments for your consideration for inclusion in the Final Determination of Compliance (FDOC).

Comments on PDOC Conditions

Emission Limits

Staff believes that mass emission limits in terms of pounds per hour, per day, and per year for the different operating scenarios (normal, startup/shutdown, and initial commissioning) should be added to the permit conditions. Staff will likely add such conditions to the Energy Commission Final Staff Assessment (FSA) if the District does not choose to add the mass emission limits. The specific emission limits that should be added are as follows:

Normal Hourly, Maximum Daily, and Annual Emission Limits

These mass emission limits would include normal operating maximum hourly limits for NOx, VOC, CO, SOx, and ammonia to correspond to the BACT findings; maximum daily emission limits for NOx, VOC, CO, PM10, and SOx as stipulated by the applicant; and maximum annual emission limits based on the hourly operating limits stipulated to by the applicant and included in Conditions 5 through 7 for NOx, VOC, CO, PM10, and SOx.

Startup/Shutdown Emissions

Staff believes that the maximum hourly NOx and CO startup/shutdown emissions as presented in the PDOC should be presented in a new startup/shutdown emission limit condition, which should also describe the method of compliance determination.

Initial Commissioning Emissions

Staff believes that the initial commissioning emission limits, using information presented in the AFC and data responses, should be presented in a new initial commissioning emission limit condition or conditions, or added to Condition 8. To be specific, the conditions should address the following circumstances:

- The emission monitoring and emission recordkeeping requirements during commissioning;
- The requirement to install the SCR and oxidation catalyst after completion of initial tuning (see pg. 5.1-28 of the AFC);
- A requirement to minimize the commissioning period and emissions to the extent feasible should be added; and
- The commissioning emissions should be noted to be counted in the calendar year annual emission limits for the facility.

New Source Performance Standard (NSPS) for Gas Turbines

Staff suggests adding a condition requiring 40 CFR Subpart KKKK compliance. Staff are aware that the District is not currently delegated by U.S. EPA for enforcement of this NSPS, but a condition that requires the applicant to provide some sort of annual compliance documentation (such as a letter from U.S. EPA) until SDAPCD is delegated enforcement should still be an enforceable condition.

Ammonia Emissions Calculations

Staff suggests adding a condition that provides the acceptable ammonia emission calculation method or requirements between source tests based on the parametric monitoring. An example of the parametric method for the Starwood peaking project, as required by SJVAPCD, is as follows:

> *Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: (ppmvd @ 15% O2) = ((a - (b x c/1,000,000)) x (1,000,000 / b)) x d, where a = ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NOx concentration ppmvd @ 15% O2 across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O2. If this option is chosen, the project owner shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the project owner may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the project owner shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation.*

Sulfur Oxides Emissions Monitoring

Staff suggests adding a specific condition for fuel sulfur monitoring, which could be as simple as obtaining monthly or annual average fuel sulfur data from the gas utility, for SOx emission estimation purposes and as necessary for 40 CFR Part 72 compliance. The District has been delegated the responsibility for ensuring 40 CFR Part 72 monitoring and recordkeeping compliance.

Title V Permit Compliance
Staff suggests adding a condition that provides the requirements, including schedule, for updating the Title V permit.

Notification of Non-Compliance
Staff suggests adding a general condition requiring notification of any non compliant operation (such as exceeding emission limits or other condition non-compliance) by a certain timeframe after the non-compliant operation. Currently, the conditions do not provide a method how the District would be made aware of such non compliant operations.

Comments on PDOC Engineering Evaluation

Calculated Emission Rates

The PDOC emission calculations provide emission rates for NOx, CO, and VOC that are marginally different than the applicant stipulated values. In order to have the District and Energy Commission conditions and assessments consistent, staff would like to standardize the values; either to the District's values, assuming the applicant will agree, or to the applicant's stipulated values. A comparison of the differences in the calculated emission rates for two turbines is as follows:

	Normal Operations lb/hr		Maximum Daily lbs/day		Annual tons/yr	
Pollutant	Applicant	District	Applicant	District	Applicant	District
NOx	8.4	8.8	247.8	248.1	23.1	23.9
CO	12.4	12.9	323.0	316.9	29.8	30.8
VOC	2.4	2.5	54.4	59.0	5.0	5.5
SOx	2.0	2.2	48.0	52.8	4.4	4.4

SOx corrected by staff as shown below.

Staff's calculations for the maximum SO_2 emission rate are based on mass balance using a conservatively low higher heat rate of 1,000 Btu/scf, the SDG&E maximum sulfur content of 0.75 grains/100 scf, and the maximum heat input of 468.8 MMBtu/hr. The calculation is as follows:

SO_2 lbs/hr = 468,800,000 Btu/hr / 1,000 Btu/scf * 0.75 grains S / 100 cf * 64/32 MW ratio of SO_2/S / 7000 grains/pound = 1.00 lbs/hour

This is marginally lower than the 1.1 lb/hour value used by the District.

PSA Workshop

Due to the number of issues identified in this comment letter staff is requesting that a District representative attend the PSA workshop in Chula Vista, at a time to be determined, to work through these issues with the applicant. Staff will provide District staff the time and exact location of the PSA workshop after it has been determined.

If you have any questions, please contact Keith Golden of my staff at (916) 653-1643. Thank you for the opportunity to comment on the Chula Vista Energy Upgrade Project Preliminary Determination of Compliance.

Sincerely,

DALE EDWARDS
Environmental Protection Office Manager

cc: Docket