UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

January 20, 2006

Pang Mueller
Senior Manager
Refinery, Energy & RECLAIM Administration
Engineering and Compliance
21865 E. Copely Drive
Diamond Bar, CA 91765-4182

Re: Review of Proposed Title V Permit Renewal for City of Anaheim
(Facility ID 56940)

Dear Ms. Mueller:

Thank you for the opportunity to review the proposed title V renewal permit for City of Anaheim (Facility ID 56940). EPA received the proposed permit renewal on January 4, 2006; EPA's 45-day review period ends on February 17, 2006. In consideration of a request for an expedited review of the proposed title V permit renewal, we are submitting the enclosed comments prior to the end of our review period. We have talked with your staff about these issues and appreciate their willingness to resolve our concerns prior to issuing the final renewal permit.

In addition to the enclosed comments specific to this facility, we would also like to take this opportunity to notify you of a recent letter from Matt Haber, Deputy Director, Air Division, US EPA Region 9 to Mohsen Nazemi, Assistant Deputy Executive Officer, Engineering and Compliance Division, South Coast Air Quality Management District, dated December 23, 2005, also enclosed. This letter sets forth EPA's position regarding LAER and BACT determinations for startup and shutdown operations for gas turbines and should be taken into consideration when making LAER and BACT determinations for this type of equipment in the future. We will also want to work with the South Coast Air Quality Management District to determine the best way to ensure that previously issued permits treat startup and shutdown operations appropriately.

We look forward to working with you and your staff on the issue outlined above, as well as those issues identified in the enclosed comments. Please do not hesitate to contact Kathleen Stewart of my staff at (415) 947-4119 should you have any questions.

Sincerely,

for

Gerardo C. Rios
Chief, Air Permits Office

cc: John Yee, SCAQMD
Chris Perri, SCAQMD
Suzanne Wilson, City of Anaheim

EPA COMMENTS
City of Anaheim – Proposed Title V Renewal Permit

1. **NSPS Subpart GG Requirements:**

NSPS Subpart GG is only mentioned in the emission unit/limits table in Section D, which lists the NOx and SOx limits for the gas turbine, Unit D2. This limited citing is insufficient to assure compliance with the requirements of Part 70. First, because NSPS GG is only cited in conjunction with the emission limits in the equipment table, and nowhere else in the permit, the permittee or the public may be lead to believe that the only applicable requirements of NSPS GG are the emission limits. However, there are other parts of NSPS GG that are applicable to the source, and this needs to be made clear by citing to NSPS GG elsewhere in the permit. Additionally, some requirements of NSPS GG will need to be cited in a greater level of detail. EPA's White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program, issued on March 5, 1996, states that "Citations, cross references, and incorporations by reference must be detailed enough that the manner in which any referenced material applies to a facility is clear and is not reasonably subject to misinterpretation." *See page 35.* Please amend the permit to address the following concerns:

1. 60.334 requires that an affected source using water or steam injection to control NOx emissions either (a) install a continuous monitoring system to monitor and record the fuel consumption and the ratio of water or steam to fuel, or (b) install a CEMs. According to the Statement of Basis (SB), this source uses water injection and is required to monitor the steam injection rate pursuant to Condition D12.4 in the proposed title V renewal permit. This condition requires installation of a continuous monitoring system to indicate the steam-to-fuel ratio in the permit and is listed pursuant to BACT. If the source is monitoring the steam-to-fuel ratio pursuant to 60.334(a) then 60.334(a) needs to be listed as the basis for this condition, or else a separate condition should be created.

2. The permit needs to include a requirement pursuant to 40 CFR §60.334(h) to either monitor the sulfur content of the fuel pursuant to 40 CFR §60.334(h)(1), or, pursuant to 40 CFR §60.334(h)(3), to demonstrate that the fuel meets the definition of natural gas. The permit should also indicate whether nitrogen monitoring is required pursuant to 40 CFR §60.334(h)(2).

Additionally, we would recommend the following changes to the permit:

1. The permit should include the requirements of 40 CFR §60.334(g), which requires that the owner or operator of an affected source develop and keep on

site a parameter monitoring plan which explains the procedures used to document proper operation of the NOx emission controls.

2. The permit should include a requirement pursuant to 40 CFR §60.334(j) to submit reports of excess emissions and monitor downtime.

3. The permit should contain a citation to the test methods and procedures section of NSPS GG, 40 CFR §60.335.

Finally, a citation to the applicable requirements of NSPS Subpart A needs to be added to the permit.

2 Periodic Monitoring for Particulate Matter and Opacity

Condition D372.1 states that "The operator shall determine compliance with the particulate matter (PM) emission limit by conducting a source test…using AQMD Method 5.1…" The tagged basis for this requirement is Rule 3004(a)(4) – Periodic Monitoring. The condition applies to the gas turbine, unit D2. Unit D2 is subject to PM emission limits pursuant to Rules 409 and 475; Rule 409 requires compliance with a concentration limit, while Rule 475 requires compliance with both a concentration and a mass limit. The condition does not indicate with which PM emission limit the source test is intended to show compliance. The permit or the Statement of Basis should be revised to clarify the exact basis for this condition.

Additionally, the permit indicates that Unit D1, an emergency internal combustion engine, is subject to Rule 404. According to the periodic monitoring guidelines, compliance with this rule is determined through the following: engineering calculation by the use of appropriate emission factors, equipment limitation, process throughput limit and recordkeeping, or a requirement to vent the equipment to a control device meeting the monitoring requirements in Appendix A. Compliance with Rule 404 is not discussed in the Statement of Basis accompanying the renewal permit, or in any of the engineering evaluations made available to EPA during our review of the renewal permit. The Statement of Basis should discuss Unit D1's compliance with and periodic monitoring for Rule 404.

3. Statement of Basis

1. In the introduction (3rd paragraph), SCAQMD states that the title V major source threshold for a particular pollutant depends on the attainment status of the pollutant, and goes on to list the attainment status of each pollutant. It would be useful to list the applicable thresholds here.

2. The section on construction and permitting history states that there have been no subsequent revisions to the initial title V permit; however, we have in our files a minor modification from 2002 to treat shutdowns as exempt from the CO limit. The revision was finalized on September 10, 2002.

3. In general, the section on regulatory applicability determinations is good in that it discusses which major requirements apply, which portions of the requirements apply, and refers the reviewer to specific permit conditions. Some suggestions for improving this section are: a) in stating that applicability determinations can be found in the engineering evaluations, state specifically which evaluation the NSPS GG determination is in (i.e. give the date and application number), and b) discuss the requirements of 40 CFR §60.334(h), and NSPS Subpart A. As a general matter, the District should attach the relevant engineering evaluations to the title V permit whenever they are cited in a statement of basis. This will ensure that the engineering evaluations are readily accessible to EPA and the public when reviewing the permit.

4. Section 5 discusses monitoring and operational requirements. The discussion regarding periodic monitoring is limited to a statement that "discussion of any applicable monitoring and operational requirements can be found in the Engineering Evaluations." Periodic monitoring requirements are integral to title V and should be discussed in further detail in a statement of basis. Perhaps a suitable compromise would be for SCAQMD to discuss in the statement of basis those requirements for which a periodic monitoring determination has been made, and then refer to the specific engineering evaluation that discusses each determination.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

December 23, 2005

Mohsen Nazemi
Assistant Deputy Executive Officer
Engineering and Compliance
21865 E. Copely Drive
Diamond Bar, CA 91765-4182

Re: LAER/BACT for Proposed Cogeneration Unit at University of California, Irvine (Facility ID 800288)

Dear Mr. Nazemi:

Thank you for the opportunity to review the proposed revisions to the title V permit for the University of California, at Irvine ("UC Irvine"). The purpose of the proposed revisions is to allow installation of a gas turbine cogeneration unit equipped with low-NOx burners, selective Catalytic Reduction ("SCR"), and carbon monoxide ("CO") oxidation catalyst. EPA received the proposed permit on December 9, 2005; EPA's 45-day review period ends on January 22, 2006. In consideration of a request from UC Irvine's consultant, Environ, EPA has performed an expedited review of the proposed title V permit modification. We would like to notify you of two issues we have identified related to the LAER (California BACT) determination for the gas turbine cogeneration unit, and we are writing to request that your staff consider the following in making LAER and BACT determinations for this type of unit in the future.

First, the permit states that the 2 ppm NOx, the 2 ppm VOC and the 3 ppm CO emission limits do not apply during startup. EPA acknowledges that in some instances it can be technically infeasible for gas turbines to achieve such low limits during startup and shutdown events. However, it is important to note that LAER and BACT apply during all modes of operation, although alternate LAER and BACT limits may be specified for varying modes of operation[1]. Engineering evaluations should document if it is technically infeasible for a source to achieve the LAER or BACT limits set for normal operations during startup or shutdown, and should then identify what alternate limits,

[1] *For further discussion please see* Memo from John B. Rasnic, Dir., Stationary Source Compliance Div., OAQPS, to Linda M. Murphy, Dir., Air, Pesticides and Toxics Mgt Div., Region 1 (Jan. 28, 1993), and a number of EAB opinions on this matter. See, e.g., In re RockGen Energy Center, 8 E.A.D. 536, 554 (EAB 1999); In re Tallmadge Generating Station, PSD Appeal No. 02-12, slip op. at 24 (EAB May 21, 2003); and In re Indeck-Niles Energy Center, PSD Appeal No. 04-01, slip op. at 14 (EAB Sept. 30, 2004).

controls, and work practices are appropriate to ensure that LAER or BACT is achieved during all modes of operation.

Second, the engineering evaluation states that the "current BACT emission limits for natural gas-fired turbines rated at 3-50 MWe are 2 ppmvd for NOx, 2 ppmvd for VOC and 3 ppmvd for CO." On October 25, 2001, EPA informed SCAQMD that a District BACT determination must start with 2 ppm for CO emissions, based on a determination by the Massachusetts Department of Environmental Protection that LAER for CO is 2 ppm. See letter from Gerardo C. Rios, Chief of the Permits Office, Air Division, EPA Region 9 to Mohsen Nazemi, Assistant Deputy Executive Officer, Engineering and Compliance Division, South Coast Air Quality Management District, dated October 25, 2001. There are a number of additional examples of combined cycle gas turbines equipped with Oxidation Catalyst being permitted at 2 ppm CO, on a 1-hour average. We are reiterating our request that SCAQMD consider 2 ppm CO in making LAER and BACT determinations for gas turbines.

We look forward to working on these issues with your staff in the future. Please do not hesitate to contact Kathleen Stewart of our permits office at (415) 947-4119 should you have any questions or if you wish to obtain copies of cited guidance and EAB cases.

Sincerely,

Matt Haber
Deputy Director
Air Division

cc: Michael Mills, SCAQMD
Maria Vibal, SCAQMD
Joe Hower, Environ
Dick Sun, UC Irvine