



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

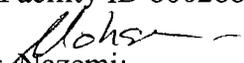
REGION IX

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-NO_x 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 NO_x, 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 operation¹. 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