



Compliance and Enforcement Division
January 17, 2008
Compliance Advisory

This Advisory is provided to inform you about activities of the Air District that may affect your operation. It will help you achieve and maintain compliance with applicable air quality rules and regulations.

ATTENTION: STATIONARY GAS TURBINE OWNERS AND OPERATORS

SUBJECT: NEW REQUIREMENTS FOR STATIONARY GAS TURBINES (REGULATION 9, RULE 9)

On December 6, 2007, changes were made to Regulation 9, Rule 9 which may affect any stationary gas turbine at your facility. Some highlights from the changes are as follows:

- **New Emission Limits Effective January 1, 2010:** Beginning in 2010, many classes of turbines will be subject to new, lower NO_x emissions limits. The new limits are shown in the table below for each turbine size category (based on heat input rating). For each size category, the limit depends on the type of fuel used. If you fire a mixture of different fuels, the NO_x limit is the highest NO_x limit for any of the various fuels in the mixture that is being fired.

Emissions Limits Table for Stationary Gas Turbines (Effective 1/1/2010)			
Turbine Heat Input Rating (MM Btu/hr)	Natural Gas*	Refinery Fuel Gas, Waste Gas, or LPG*	Non-gaseous Fuel*
< 5	Exempt	Exempt	Exempt
5 - 50	2.12 / 42	2.53 / 50	3.28 / 65
> 50 - 150 No commercially available retrofit	1.97 / 42	2.34 / 50	3.04 / 65
> 50 - 150 Water or steam injection available	1.64 / 35	2.34 / 50	3.04 / 65
> 50 - 150 Dry low NO _x technology available	1.17 / 25	2.34 / 50	3.04 / 65
> 150 - 250	0.70 / 15	0.70 / 15	1.97 / 42
> 250 - 500	0.43 / 9	0.43 / 9	1.17 / 25
> 500	0.15 / 5	0.26 / 9	0.72 / 25

**For each emission limit shown, the first number is the output-based limit expressed in lbs. per megawatt hour, and the second number is the volumetric limit expressed as parts per million dry basis at 15% O₂.*

- **New Option For Measuring Compliance:** When the new standards take effect in 2010 they will be expressed in two ways:
 - On a volumetric basis (ppm), as with the current standards. Note, however, that the current adjustment of NO_x limit based on thermal efficiency will no longer apply.
 - On a power-output basis (lb/MWhr, using the electrical energy, mechanical work, steam, etc., generated by the turbine).

over →

You will be able to demonstrate compliance with the regulation by measuring emissions against either expression of the applicable standard. If you choose to use the power-output based standard, you may have to install additional equipment to measure the parameters used to calculate mass emissions and power output.

- **If You Will Need To Install New Equipment To Meet These Standards, Permit Applications Are Due July 1, 2008:** If you cannot meet the new emission limits shown in the table above with your existing pollution control equipment, and will therefore have to install new equipment to meet the limits, you will have to submit a Permit Application to install and operate the equipment by July 1, 2008.
- **Annual source tests are required to be submitted to the Air District:**
 - For modified sources or where new control equipment is installed, a source test is required within 2 months of initial operation of the new or modified equipment,
 - For turbines subject to the emission limits that do not have Continuous Emissions Monitoring Systems (CEMS), a source test is required every calendar year, at intervals of not more than 15 months, unless the turbine is operated less than 400 hours/year in which case a source test is required every two years.

Exemptions May Apply: Various operations for stationary gas turbines have full or limited exemptions based on size (< 5 MM Btu/hr), low usage (< 50 MM Btu/hr and < 877 hours/12 months period), very limited use, inspection and maintenance periods, start up (< 6 hours) and shut down (< 2 hours), etc. See Sections 110 through 120 of Regulation 9-9 for specific provisions.

More Information can be obtained from the following sources:

- ☎ For questions about this Advisory, contact Michael Krone, Air Quality Specialist, at mkrone@baaqmd.gov or (415) 749-4779.
- ☎ For a copy of the above listed rule, see: www.baaqmd.gov/dst/regulations/index.htm
- ☎ For Authority to Construct forms, see www.baaqmd.gov/pmt/forms/index.htm
- ☎ For compliance assistance, call (415) 749-4999, the Compliance Counselor Hotline.

Kelly J. Wee
Director of Compliance and Enforcement
Bay Area Air Quality Management District