July 2, 2007

NOTICE OF WORKSHOP

FOR DISCUSSION OF PROPOSED AMENDMENTS TO RULE 69.3.1 - STATIONARY GAS TURBINE ENGINES – BEST AVAILABLE RETROFIT CONTROL TECHNOLOGY

The San Diego County Air Pollution Control District (District) will hold a public meeting to consider comments concerning proposed amendments to District Rule 69.3.1 – Stationary Gas Turbine Engines – Best Available Retrofit Control Technology. Comments may be submitted in writing before, or made at, the workshop, which is scheduled as follows:

DATE: **Friday, August 3, 2007**

TIME: **9:00 a.m. to 11:00 a.m.**

PLACE: **San Diego Air Pollution Control District**
Main Conference Room
10124 Old Grove Road
San Diego, CA 92131

San Diego County does not meet the National and State Ambient Air Quality Standards for ozone and is classified as an ozone nonattainment area. State law requires the District to implement feasible rules that regulate emissions of ozone precursors - volatile organic compounds (VOC) and oxides of nitrogen (NOx).

Rule 69.3.1, which the District adopted in 1998, regulates emissions of NOx from any stationary gas turbine installed on or before December 16, 1998, with a power rating of 1.0 megawatt (MW) or greater, or any stationary gas turbine installed after December 16, 1998, with a power rating of 0.3 megawatt (MW) or greater. The District is proposing amendments to the rule to limit operation of some peaking power plants on forecast high ozone days, address operational issues of turbines including the startup time allowed for combined-cycle turbines, synchronize District required testing with requirements of the federal Acid Rain Program, and clarify and improve monitoring and recordkeeping requirements.

To fulfill the District's commitment in the San Diego County Regional Air Quality Strategy (RAQS) to implement all feasible control measures as required by State law, the District is proposing to limit the times when certain peaking turbines are allowed to operate throughout the year. Peaking turbines are used to ensure reliability of the electrical grid and typically operate only on days of high electrical demand. Recently constructed peaking turbines have controlled emissions far below the current rule standards. However, older peaking turbines limited to less

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than 877 hours per year of operation are currently subject to a less stringent standard than other turbines of similar size. Though these older peaking turbines do not operate for the majority of the year, the impact on air quality can be significant on the days they do operate. In order to mitigate the level of emissions from these older existing peaking turbines, the District is proposing to restrict their operation on forecast high ozone days unless they comply with the more stringent emission standard applicable to other turbines, or there is an electrical grid emergency requiring their use. The District is also proposing that no new peaking turbines would be allowed higher emission standards than other turbines of similar size.

In addition, the District is proposing to extend the 120-minute exemption from the NOx standards of the rule to 360 minutes for all startups of large combined-cycle turbines. When Rule 69.3.1 was adopted in 1998, the 120-minute startup provision was intended to minimize emissions during startup and provide a sufficient period of time for the emission control equipment to achieve the level of emissions allowed by the rule. The period of 120 minutes was determined to be an adequate period of time for startup of gas turbines for simple cycle or cogeneration units that did not utilize a steam turbine to generate additional electrical power. At that time, Rule 69.3.1 did not include requirements specific to combined-cycle gas turbines because there were no existing or proposed combined-cycle units operating in San Diego County and only a few elsewhere in the country.

A combined-cycle gas turbine is comprised of a gas turbine that is used to generate electrical energy and an associated steam turbine system that generates additional electrical energy. Heat is recovered from the gas turbine exhaust gases to generate steam. The steam is then directed through the steam turbine to generate additional electrical power. This recovery of heat to generate steam and additional power increases the thermal efficiency of a combined-cycle electrical power plant. As a result, combined-cycle power plants use less fuel and produce less pollution to generate the same amount of electrical power than other combustion driven power plants. The one combined-cycle power plant operating in San Diego County produces less than 50% of the NOx to generate the same amount of electricity as the other large electrical power plants in San Diego County. However, during startup, key components of the associated steam power system portion of the combined-cycle process undergo thermal stresses due to expansion of the metal components. These stresses are largest and the potential for damage greatest when the steam turbine has been allowed to cool for several days. Thus, the rate at which the steam system may be heated during a startup is limited to prevent damage to the equipment. As a result of these and other technological constraints on the plant equipment, combined-cycle facilities operating in California are generally allowed startup durations of more than 120 minutes.

The District is proposing to amend Rule 69.3.1 to extend the time allowed to start a combined-cycle turbine to 360 minutes, but only under certain limited conditions where a 120-minute startup might damage critical equipment. Based on recent operational experience at a large combined-cycle facility in San Diego County, the District anticipates that the allowed longer startup time will only be required a few times a year. With the proposed amendments, the much more frequent regular startups will still be limited to 120 minutes or less.

Specifically, the proposed amendments will:

- Prohibit the operation of peaking turbines on forecast ozone exceedance days (except for days on which an electrical grid emergency has been declared by the California Independent

System Operator), unless they comply with the most stringent standard in the rule applicable to that size of turbine.

- Specify that the higher NOx emission standards for peaking units operating less than 877 hours per calendar year and larger than 4 MW are only applicable to peaking units installed on or before the amended rule's adoption date.

- For combined-cycle turbines, exempt startups under certain conditions from the NOx emission standards of the rule for a maximum period of 360 minutes.

- For turbines equipped with dry low NOx combustors, exempt periods of operation at low load from the NOx emission standards of the rule. The periods of operation at low load shall not exceed 130 minutes per day, 780 minutes per year and the turbine must be equipped with a continuous emission monitoring system that monitors fuel flow and electrical output.

- Clarify monitoring and recordkeeping provisions.

- Require an owner or operator of any peaking or emergency gas turbine to install a non-resettable hour meter if deemed necessary by the District.

- Update the test method references.

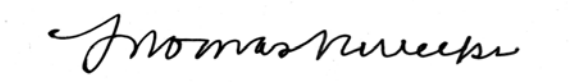
- For units subject to the federal Acid Rain Program, specify that source tests are to be conducted at a frequency in accordance with 40 CFR Part 75 Appendix B Sections 2.3.1 and 2.3.3.

- Add definitions for combined-cycle gas turbine engine, dry low NOx combustor, electrical grid emergency, extended startup and period of operation at low load.

- Clarify and revise the definitions for emergency situation, manufacturer's rated thermal efficiency, power rating, shutdown and startup.

In addition, the proposed rule amendments provide other minor clarifications and updates.

If you would like a copy of the proposed amendments to Rule 69.3.1, please visit the District's website at www.sdapcd.org, under Rules & Regulations, Public Workshop; or call Luann Serbesku at (858) 586-2755. If you have any questions concerning the rule, please contact Randy Consolacion at (858) 586-2752 or Steven Moore at (858) 586-2750.



THOMAS WEEKS, Chief of Engineering
Air Pollution Control District

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