



Air Pollution Control Board

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COMPLIANCE ADVISORY

ADOPTION BY REFERENCE

TITLE 40 CODE OF FEDERAL REGULATION (CFR) PART 60 NEW SOURCE PERFORMANCE STANDARDS (NSPS):

SUBPART GG – STANDARDS OF PERFORMANCE FOR STATIONARY GAS TURBINES SUBPART KKKK – STANDARDS OF PERFORMANCE FOR COMBUSTION TURBINES

On February 25, 2009, the San Diego County Air Pollution Control Board adopted amendments to Regulation X by repealing existing version of Federal New Source Performance Standards (NSPS) Subpart GG – Standards of Performance for Stationary Gas Turbines and adopting by reference the most recent amendments to Subparts GG and KKKK– Standards of Performance for Combustion Turbines into Regulation X.

New Source Performance Standards are periodically issued by the U.S. Environmental Protection Agency and apply throughout the country to specified new, modified, and reconstructed stationary sources of air pollution such as power plants.

The Air Pollution Control District's Regulation X contains federal New Source Performance Standards that governs stationary sources of air pollution and that were locally adopted and for which delegation was received from the U.S. Environmental Protection Agency. Periodic amendments to Regulation X are necessary to incorporate new or amended federal New Source Performance Standards by reference.

Subparts GG and KKKK each apply to specific combustion turbines and establish emission limits for nitrogen oxides (NO_x) and sulfur dioxides (SO₂). Subpart KKKK applies to turbines built after February 18, 2005, while Subpart GG applies to turbines built prior to that date and after October 3, 1977. Subpart KKKK reflects advancements in emission control technologies and turbine design whereas the emission standards in Subpart GG, applicable to existing older turbines, have remained relatively unchanged since first promulgated in 1979. Most other requirements of the two regulations are the same, including reporting, record keeping, and test methods.

OVER

SUBPART GG

Subpart GG – Standards of Performance for Stationary Gas Turbines was first promulgated by the EPA on September 10, 1979, and subsequently adopted with minor modifications by the District into Regulation X (Regulation X, Subpart GG). The District petitioned EPA for delegation and received authority to implement and enforce Regulation X, Subpart GG, on May 24, 1982. EPA had amended Subpart GG several times since its original promulgation, causing the Regulation X version of the Subpart to become outdated. To correct this problem, the District repealed the Regulation X version of Subpart GG and adopted, by reference, the updated federal version of Subpart GG on October 17, 2001, and received delegation from EPA on January 3, 2008. EPA has amended Subpart GG several times since October 17, 2001, causing the current Regulation X version to become outdated.

NSPS Subpart GG applies to stationary gas turbines with a heat input at peak load equal to or greater than 10 million British Thermal Unit (Btu) per hour which commenced construction, modification, or reconstruction after October 3, 1977. Federal Subpart GG was most recently modified to add additional alternative testing and monitoring procedures, and to harmonize the provisions of Subpart GG with the monitoring provisions of 40 CFR Part 75, the continuous emission monitoring requirements of the federal acid rain program.

Since EPA originally promulgated Subpart GG, there have been many advances in the design of the NO_x emission controls used in gas turbines. Therefore, EPA amended the regulation to allow continuous emission monitoring systems (CEMS) to demonstrate compliance. EPA has also amended the requirement to monitor the nitrogen content of the fuel only if the facility claims an allowance for fuel-bound nitrogen. The sampling frequency for determining nitrogen and sulfur content of fuel oil has also been amended. A definition has been added for natural gas and test methods updated.

There are no changes to the emission standards for NO_x or SO₂ between the District's Regulation X version and current federal version.

SUBPART KKKK

Subpart KKKK – Standards of Performance for Combustion Turbines was first promulgated by EPA on July 6, 2006.

NSPS Subpart KKKK applies to stationary combustion turbines with a heat input at peak load equal to or greater than 10 million Btu per hour, which commenced construction, modification, or reconstruction after February 18, 2005. Combustion turbines subject to NSPS Subpart KKKK are exempt from Subparts GG, Da, Db, and Dc. Combustion turbine test cells/stands and turbines at integrated gasification combine cycle electric utility steam generating units subject to NSPS Subpart Da are exempt from all requirements of Subpart KKKK. Emergency combustion turbines and turbines used in research and development are exempt only from the NO_x emission limits of Subpart KKKK.

Combustion turbines applicable to Subpart KKKK must meet the emission limits for the regulated pollutants NO_x and SO₂. The NSPS establishes 14 subcategories of turbines based on fuel type and turbine size, and each subcategory has a different NO_x emission limit. The emission limit standards also allow the turbine owner or operator the choice of a concentration-based (ppm) or output-based standard (lb/MWh). See Table 1 of the NSPS for these limits.

Subpart KKKK requires emissions monitoring, source testing, and reporting to demonstrate compliance with the emission limits. The rule intends to harmonize the monitoring and quality assurance provisions of Subpart KKKK with the provisions of 40 CFR Part 75, the continuous emission monitoring requirements of the federal acid rain program, similar to changes made to Subpart GG.

If you would like a copy of the current federal version of Subpart GG or KKKK, please visit the District's Website at <http://www.sdapcd.org/rules/Appendix/randrAppen.html> (Appendix C - NSPS), or contact Janet McCue at (858) 586-2712.

GMH:jl