FACT SHEET

FINAL RULE TO REDUCE HAZARDOUS AIR EMISSIONS FROM NEWLY BUILT STATIONARY COMBUSTION TURBINES

ACTION

! On August 29, 2003, the Environmental Protection Agency (EPA) issued requirements to reduce toxic air emissions from stationary combustion turbines. These requirements apply to turbines used at facilities such as power plants, chemical and manufacturing plants, and pipeline compressor stations.

! The final rule will reduce emissions of a number of toxic air pollutants such as formaldehyde, toluene, acetaldehyde, and benzene. These pollutants, also known as air toxics, are known or suspected to cause adverse health and environmental effects.

! The final rule limits the amount of air pollution that may be released from exhaust stacks of any new stationary combustion turbine (built after January 14, 2003). Existing turbines do not have to meet emission limitations.

! New turbines must comply with the final rule when they are brought on line. These units have up to 6 months after the rule is final, or 6 months after startup, whichever is later, to demonstrate compliance with the new standards.

! The final rule requires certain types of stationary combustion turbines to reduce formaldehyde emissions to 91 parts per billion or less. This applies to:

- each lean premix combustion turbine which burns natural gas and oil at sites where all turbines burn oil for no more than 1000 hours annually;
- each lean premix combustion turbine which burns oil at sites where all turbines burn oil for more than 1000 hours annually ;
- each diffusion flame combustion turbine which burns natural gas and oil at sites where all turbines burn oil for no more than 1000 hours annually; and
- each diffusion flame combustion turbine which burns oil at sites where all turbines burn oil for more than 1000 hours annually.

By reducing formaldehyde, facilities also will reduce the other air toxics to similar levels.

! The EPA expects owners or operators of these turbines to install equipment known as “carbon monoxide catalytic oxidation systems.” These systems not only reduce carbon monoxide emissions, they also reduce air toxic emissions such as formaldehyde, toluene, acetaldehyde, and benzene.

! Facilities may use other means to reduce emissions and comply with the formaldehyde emissions limit of 91 parts per billion. If they choose to do so, they must petition the

Administrator to establish parameters that determine continuous compliance.

! The EPA estimates that nine new stationary combustion turbines will be built each year over the next 5 years and will be subject to the final rule.

HEALTH/ENVIRONMENTAL BENEFITS

! The final rule will provide improvements in protecting human health and the environment by reducing air toxic emissions 98 tons per year in the 5th year after the rule is final. The air toxics reduced are listed below:

Pollutant	Emission Reductions (in 5th yr after promulgation)	Percent Reduction (after controls are installed)
Formaldehyde	67 tons	90 percent
Toluene	17 tons	90 percent
Acetaldehyde	11 tons	90 percent
Benzene	3 tons	90 percent

! Exposure to emissions of these air toxics may produce a wide variety of human health effects including irritation of the eyes, skin and mucous membranes, dysfunction of the central nervous system, and narcosis. Formaldehyde exposure has been associated with reproductive effects such as menstrual disorders and pregnancy problems. The EPA has classified formaldehyde as a probable human carcinogen.

COST

! The EPA estimates the total nationwide capital costs for the final rule to be $143 million within the first 5 years, with an annualized cost of $43 million in the 5th year.

BACKGROUND

! The Clean Air Act (CAA) requires EPA to develop standards for categories of facilities that emit one or more of 188 listed toxic air pollutants. These standards require the application of strict air emissions controls known as maximum achievable control technology (MACT).

! The EPA identified Stationary Combustion Turbines as a category of sources that emit one or more of the listed air toxics. The final rule applies to existing turbines located at a major source of toxic air pollutants. Major sources are those that emit 10 tons per year or more of a single toxic air pollutant, or 25 tons per year or more of a combination of toxic air pollutants.

- The CAA requires EPA to identify MACT controls based on the emissions levels achieved by the best-performing facilities. This baseline for controls, or MACT floor, is established differently for existing and new sources. In the case of stationary combustion turbines, there were not enough existing turbines with controls to establish a MACT floor. Requiring these facilities to add controls required for new turbines would be cost prohibitive.

FOR MORE INFORMATION

- To download the final standards from EPA's web site, go to "Recent Actions" at the following address: *http://www.epa.gov/ttn/oarpg.*

- For further information about the final rulel, contact Mr. Sims Roy at EPA's Office of Air Quality Planning and Standards at 919-541-5263.

- For information regarding stationary combustion turbines, visit EPA's web site at: *http://www.epa.gov/ttn/atw/turbine/turbinepg.html*. For other combustion-related regulations, visit EPA's Combustion Related Rules page at: *http://www.epa.gov/ttn/atw/combust/list.html.*