FACT SHEET

Final Rule to Reduce Toxic Air Emissions From Lime Manufacturing Plants

ACTION

- On August 25, 2003, the Environmental Protection Agency (EPA) issued a final rule to reduce toxic air pollutant emissions from new and existing lime manufacturing plants. Toxic air pollutants, or air toxics, are those pollutants known or suspected to cause cancer or other serious health effects.

- This rule applies to commercial and captive (produced and utilized internally; not sold on the open market) lime manufacturing plants that are located at sources that emit enough toxic air pollutants to be defined as "major" under the Clean Air Act. A major stationary source of air toxics emissions is one with the potential to emit greater than 10 tons per year of any one air toxic or 25 tons per year of any combination of air toxics.

- This rule does not apply to lime manufacturing plants located at pulp and paper mills because they are regulated by another air toxics rule. Lime manufacturing plants at beet sugar factories are also not regulated because they are not major sources of air toxics. **Lime manufacturing plants that only process water softening wastes are not regulated because the materials they use to produce lime do not contain metal air toxics.**

- There are approximately 49 commercial and 7 captive lime manufacturing plants throughout the U.S.

- Lime manufacturing is an energy intensive process in which lime is made by crushing limestone and then heating it in a kiln. The kiln is a large furnace that is typically fueled by coal, oil, natural gas, and/or petroleum coke.

- The main source of air toxics emissions from a lime plant is the kiln. Emissions originate from the burning of fuels and the heating of feed material. Air toxics are also emitted in trace quantities from the grinding, cooling, and other materials processing steps in the manufacturing process.

- The primary air toxics present in the exhaust gases are metals such as arsenic, cadmium, chromium, and nickel; and hydrogen chloride. The health effects associated with exposure to these air toxics include cancer, respiratory irritation, and damage to the nervous system.

- The final rule:
  - < sets emissions limits for particulate matter (PM) from existing lime kilns and coolers at 0.12 pounds of PM per ton of feed to the kiln;
  - < sets emission limits for PM from existing kilns and coolers with wet scrubbers at 0.60 pounds of PM per ton of feed to the kiln;

- < sets emissions limits for PM from new lime kilns and coolers at 0.10 pounds of PM per ton of feed to the kiln (PM is a surrogate, or more easily measured but meaningful substitute, for non-volatile toxic metals.);
- < sets emissions limits for PM and sets visible emissions requirements from certain types of materials processing operations such as screening operations, storage bins, and material conveying equipment;
- < allows the use of a new test method for measuring emissions of hydrogen chloride from lime kilns (this new method may be used by lime plant owners/operators to determine if their plants are major sources of air toxics);
- < requires continuous monitoring of operating parameters which indicate the performance of the air pollution controls and emissions of pollutants; and
- < requires certain recordkeeping and reporting requirements, including semiannual compliance reports.

BENEFITS AND COST

! This rule will reduce air toxic metals emissions by about 3.6 tons per year in the fifth year after promulgation. Particulate matter emissions will be reduced by 3,880 tons per year.

! EPA expects that implementation of this final rule will result in national annualized costs of approximately $18 million per year, which includes $622,000 for recordkeeping and reporting.

! EPA expects that possibly two companies may cease their current lime manufacturing operations as a result of this final rule.

BACKGROUND

! Under the Clean Air Act, EPA is required to regulate emissions of 188 listed toxic air pollutants. The Clean Air Act also requires EPA to develop a list of industries, known as source categories, that emit one or more of the 188 listed air toxics. EPA's published list of source categories includes the lime manufacturing industry.

! For each source category, EPA issues standards that require the application of stringent air pollution reduction measures known as maximum achievable control technology.

FOR MORE INFORMATION

! To download the standard from EPA's website on the Internet, go to "Recent Actions" at the following address: www.epa.gov/ttn/oarpg/ramain.html.

! For general information about the final rule, contact Mr. Keith Barnett of EPA's Office of Air Quality Planning and Standards, at (919) 541-5605 or by e-mail at barnett.keith@epa.gov

- The EPA's Office of Air and Radiation's (OAR's) homepage on the Internet contains a wide range of information on the air toxics program and many other air pollution programs and issues. The OAR's home page address is: www.epa.gov/oar/.