

February 28, 2003

## **FINAL AIR TOXICS RULE FOR SEMICONDUCTOR MANUFACTURING FACT SHEET**

### **TODAY'S ACTION**

The Environmental Protection Agency (EPA) is issuing a final rule to control the emission of toxic air pollutants from the manufacture of semiconductors. Toxic air pollutants, also known as air toxics, are those pollutants known or suspected to cause cancer or other serious health problems.

The semiconductor manufacturing industry is a subset of the electronics manufacturing industry, and produces integrated circuits or "chips." Integrated circuits combine the functions of discrete electronic devices in a miniature device that can perform complicated electronic functions in a fraction of a second. The electronics manufacturing industry produces devices such as computers, appliances, radios, CD players, and other finished goods that incorporate these integrated circuits.

Approximately thirty air toxics are emitted during semiconductor manufacturing. However, EPA estimates that over 90 percent of all emissions are hydrochloric acid, hydrofluoric acid, glycol ethers, methanol, and xylene.

This rule affects new and existing semiconductor manufacturing facilities. While EPA has identified approximately 170 existing facilities engaged in the manufacture of semiconductors, only one of these facilities has the potential to emit enough air toxics to be affected by this rule. EPA estimates that this facility currently emits less than one ton of air toxics per year, and we do not anticipate further reductions resulting from this final rule.

- The final rule requires controls on the emission of air toxics from process vents and storage tanks. The rule contains separate control requirements for process vents containing organic pollutants, such as methanol, and process vents containing inorganic pollutants, such as hydrochloric acid or hydrofluoric acid.
- Process vents containing organic air toxics are required to reduce emissions by 98 percent or to below 20 parts per million by volume, while inorganic process vents are required to reduce emissions by 95 percent or to below 0.42 parts per million by volume. Storage tanks greater than 1500 gallons capacity are required to reduce emissions to the same level of control as inorganic process vents.
- EPA estimates that there will be no capital or operating costs for control equipment needed to comply with the final rule. We estimate the total annualized cost of the final rule for the one affected facility to be approximately \$2,300 to comply with monitoring, inspecting, recordkeeping, and reporting requirements. We estimate a

one-time cost of \$33,000 for the remaining facilities in the industry to read through the rule.

## **BACKGROUND**

The Clean Air Act requires EPA to regulate emissions of 188 listed toxic air pollutants. For major sources (those with the potential to emit 10 tons annually or more of a listed pollutant or 25 tons or more of a combination of pollutants), the law requires EPA to develop standards requiring the application of stringent air pollution controls known as maximum achievable control technology, or MACT.

## **FOR MORE INFORMATION**

- To download the rule from EPA's World Wide Web site, to <http://www.epa.gov/ttn/oarpg/ramain.html> . For more information about today's rule, contact John Schaefer of EPA's Office of Air Quality Planning and Standards at (919) 541-0296.
- EPA's Office of Air and Radiation's web page contains additional information on the air toxics program, as well as many other air pollution programs and issues. The address is <http://www.epa.gov/oar>.