

8/22/96

**FACT SHEET**

**PROPOSED AIR TOXICS RULE FOR PRIMARY ALUMINUM REDUCTION PLANTS**

**TODAY'S ACTION...**

- ◆ The Environmental Protection Agency (EPA) is today issuing a proposed rule that would reduce emissions of air toxics from primary aluminum reduction plants. Air toxics are those pollutants that are known or suspected of causing cancer or other serious health effects.
- ◆ Primary aluminum reduction plants produce molten aluminum metal (virgin aluminum) from alumina ore. Other types of manufacturing facilities, such as secondary aluminum plants, use aluminum metal to make a variety of products such as cans, aircraft and automotive products, and construction materials.

**WHAT ARE THE HEALTH AND ENVIRONMENTAL BENEFITS?**

- ◆ Today's action would reduce emissions of air toxics, including polycyclic organic matter and hydrogen fluoride, that are released during the production of molten aluminum metal. Polycyclic organic matter is strongly suspected of causing cancer and other serious health effects in humans. Exposure to hydrogen fluoride can cause serious respiratory damage.
- ◆ EPA's proposed rule would reduce emissions of polycyclic organic matter and fluoride by approximately 5,700 tons per year, representing an estimated 50 percent reduction from current levels.
- ◆ EPA's proposed rule would also reduce emissions of particulate matter by 16,000 tons per year. Approximately 50 percent of the emissions reductions is measured as "PM-10" (indicating particle sizes smaller than 10 microns in diameter). Exposure to particulate matter has been linked with adverse health effects, including aggravation of existing respiratory and cardiovascular disease and increased risk of premature death. EPA is currently reviewing its health-based national ambient air quality standards for particulate matter and will propose whether or not it plans to revise the current standards by November 29, 1996.
- ◆ Today's action would have the added benefit of reducing the

deposition of polycyclic organic matter on sensitive ecosystems, such as the Great Lakes. EPA's first Report to Congress on the Deposition of Air Pollutants to the Great Waters, issued in May 1994, identified polycyclic organic matter as one of fifteen pollutants of concern because of its persistence in the environment, potential to accumulate, and toxicity to humans and the environment. Data indicate that these pollutants of concern are present in at least some of the Great Lakes and that atmospheric deposition (e.g. rainfall) is a pathway by which they reach the waterbodies.

#### **HOW DID EPA DEVELOP THE PROPOSED RULE IN PARTNERSHIP WITH STAKEHOLDERS?**

- ◆ Today's action was developed as a pilot project through a rulemaking process known as "MACT" (maximum achievable control technology) Partnerships. This process combines State and local skills in monitoring and controlling sources of air toxics with EPA's national program experience to develop and issue better regulations in a more streamlined and cost-effective manner.
- ◆ EPA's MACT partnerships program involves a cooperative effort among stakeholders (such as industry and State and local agencies) from the outset of the rule development process, including identifying data needs, and collecting, exchanging and analyzing data. For example, emissions tests for this proposed rule were conducted with shared funding from EPA, the Washington State Department of Ecology, and the aluminum industry. The State of Washington has the largest number of primary aluminum facilities nationwide that would be impacted by the proposed rule.
- ◆ In addition to the State of Washington and the aluminum industry, EPA worked in partnership with other State regulators, tribal governments, and STAPPA/ALAPCO (State and Territorial Air Pollution Program Administrators /Association of Local Air Pollution Control Officials) in developing the proposed rule.
- ◆ EPA's MACT partnership process has subsequently been applied during the development of several other air toxics or MACT standards, including those for pharmaceutical production and acrylic/modacrylic fibers production.

#### **BACKGROUND**

- ◆ Under the Clean Air Act Amendments of 1990, EPA is required

to regulate emissions of 189 listed toxic air pollutants. On July 16, 1992, EPA published a list of industrial source categories that emit one or more of these air toxics. For listed categories of "major" sources (those that have the potential to emit 10 tons/year or more of a listed pollutant or 25 tons/year or more of a combination of pollutants), the Clean Air Act requires EPA to develop standards that will require the application of stringent air pollution controls, known as maximum achievable control technology (MACT).

- ◆ EPA's published list of industry groups (known as "source categories") to be regulated includes primary aluminum reduction plants, which are major sources of air toxics.

#### **HOW DOES EPA'S PROPOSED RULE PROVIDE FLEXIBILITY TO INDUSTRY?**

- ◆ EPA's proposed rule contains an "emissions averaging" provision that would allow facilities flexibility to vary the level of control among certain emission sources in order to achieve the required emission reductions in the most cost-effective manner possible. In some situations, facilities may find it more cost-effective to overcontrol certain emission points and undercontrol others, so that the overall result would be equivalent or greater emission reductions at lesser control costs. The proposed rule spells out how facilities may use emissions averaging and which emission sources may be included.
- ◆ Today's action provides a cost-saving incentive to plant owners and operators for improved performance; EPA's proposal contains a provision for reducing the frequency of sampling or emissions testing at those plants that show consistent performance below the levels set in the standard. Moreover, several alternatives are provided to reduce the cost of monitoring.

#### **WHAT DOES EPA'S PROPOSED RULE REQUIRE?**

- ◆ EPA's proposed rule is based on a combination of control techniques that either prevent the escape of hydrogen fluoride and polycyclic organic matter emissions, or capture the pollutants and return them to the process. The pollution prevention measures outlined in the proposal include work practices, equipment modifications, operating practices, housekeeping measures, and in-process recycling.
- ◆ Today's action would limit emissions of hydrogen fluoride and polycyclic organic matter from primary aluminum potlines and anode bake furnaces, and polycyclic organic matter

emissions from paste production plants.

- ◆ The monitoring, recordkeeping and reporting requirements are outlined in the proposed rule.

**WHO WOULD BE AFFECTED BY EPA'S PROPOSED RULE?**

- ◆ There are 23 primary aluminum reduction plants and one offsite anode production facility nationwide that would be affected by EPA's proposed rule.

**HOW MUCH WOULD THE PROPOSED RULE COST?**

- ◆ The estimated capital cost of the proposal for all of the affected facilities is estimated to be about \$160 million.
- ◆ The estimated total annual cost of the proposed rule is estimated to be about \$40 million.
- ◆ The price of raw aluminum is projected to increase by less than one percent.

**FOR MORE INFORMATION...**

- ◆ Anyone with a computer and a modem can download the proposed rule from the Clean Air Act Amendments bulletin board (under "Recently Signed Rules") on EPA's Technology Transfer Network (TTN) by calling (919) 541-5742. For further information about how to access the bulletin board, call (919) 541-5384. For further information about the proposal, contact Steve Fruh of EPA's Office of Air Quality Planning and Standards at (919) 541-2837. EPA's Office of Air and Radiation's homepage on the internet contains a wide range of information on the air toxics program, as well as many other air pollution programs and issues. The Office of Air and Radiation's home page address is:  
[HTTP://WWW.EPA.GOV/OAR/](http://www.epa.gov/oar/)