Fact Sheet

PROPOSED RULE TO CONTROL EMISSIONS FROM PETROLEUM REFINERIES THAT OCCUR AT CATALYTIC CRACKING (FLUID AND OTHER) UNITS, CATALYTIC REFORMING UNITS, AND SULFUR PLANT UNITS

TODAY'S ACTION. . .

- The Environmental Protection Agency (EPA) is proposing to reduce hazardous air pollutants emitted from process vents on catalytic cracking units, catalytic reforming units, and sulfur recovery units at petroleum refineries. Hazardous air pollutants, also known as air toxics, are those pollutants known or suspected to cause cancer or other serious health effects.
- EPA worked with State regulators, industry representatives, individual States and associated groups and trade associations including State and Territorial Air Pollution Program Administrators (STAPPA), the Association of Local Air Pollution Control Officials (ALAPCO), the American Petroleum Institute (API), and the National Petroleum Refiners Association (NPRA) to develop this proposal.

WHAT ARE THE HEALTH AND ENVIRONMENTAL BENEFITS OF THIS ACTION?

- Petroleum refineries emit a variety of toxic air pollutants. These air toxics vary by facility and process operations but may include: acetaldehyde, arsenic, antimony, benzene, beryllium, cadmium compounds, carbonyl sulfide, carbon disulfide, chlorine, dibenzo furans, formaldehyde, hexane, hydrogen chloride, lead compounds, mercury compounds, nickel compounds, phenol, 2,3,7,8 tetrachlorodibenzo-p-dioxin, toluene, and xylenes (mixed), among others. The health effects associated with exposure to these air toxics can include cancer, respiratory irritation, and damage to the nervous system.
- By raising the control performance of affected petroleum refinery process units, the proposed rule would reduce emissions of air toxics from process vents on the three affected unit operations by approximately 82 percent from current levels. Particular sites may achieve even greater reductions.
- This action combined with EPA's earlier standards for petroleum refineries would reduce total emissions of air toxics by 59,600 tons/year.
- Other benefits of this action include a decrease in emissions of other pollutants that are not necessarily air toxics as well as lowered occupational exposure levels for employees.

BACKGROUND

- Under the Clean Air Act Amendments of 1990, EPA is required to regulate emissions of 188 listed toxic air pollutants. (Note that this list originally referenced 189 pollutants, but EPA has subsequently removed the chemical caprolactam from the list.) 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 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 require the application of stringent air pollution reduction measures known as maximum achievable control technology (MACT).
- EPA's published list of industry groups (known as "source categories") to be regulated includes major sources that emit air toxics from process vents on catalytic cracking units, catalytic reforming units, and sulfur recovery units at petroleum refineries.
- Based on current information about refineries, EPA has concluded that all petroleum refineries are major sources of emissions of air toxics.

- On August 18, 1995, EPA issued a final regulation to reduce emissions of air toxics from petroleum refineries. However, this rule did not address emissions from process vents on catalytic cracking units, catalytic reforming units, and sulfur recovery units at petroleum refineries. EPA worked with industry and other groups to develop a rule to address these emission points. In this action, EPA is issuing its proposal to address these other sources of emissions of air toxics.

WHO WOULD BE AFFECTED BY THIS PROPOSED RULE?

- The proposed standard would apply each affected source at any petroleum refinery that is a major source of emissions of air toxics (a major source is a facility that emits 10 tons/year of one pollutant, or 25 tons/year of a combination of pollutants). Affected sources include process vents on each catalytic cracking unit, each catalytic reforming unit, and each sulfur recovery plant.
- Of the 162 petroleum refineries currently operating in 33 States, 127 facilities with 394 units will be affected by this action.
- **HOW DOES THE PROPOSED RULE PROVIDE FLEXIBILITY TO INDUSTRY?**
- Facilities can reduce emissions of air toxics and other pollutants and meet the proposed standards using a variety of approaches. Refineries affected by the standards could install new control devices, but some refineries will be able to upgrade existing emission controls, or implement specific measures that will reduce emissions. EPA encourages facilities to take advantage of techniques that will prevent pollution before it is emitted. For example, plants could meet the proposed nickel standard, an alternative compliance option, by reducing the HAP metal content of feed or by hydrotreating to remove metals from the feed and use a less effective control device.

WHAT WOULD BE THE COST OF THIS PROPOSED ACTION?

- EPA expects the implementation of this regulation to result in an overall annual national cost of $53.5 million. This includes a cost of $43.7 million from operation of control devices, and a monitoring, recordkeeping, and reporting cost of $9.8 million.
- The price of petroleum products for consumers is projected to increase by 0.24 percent.

FOR MORE INFORMATION...

- Once the rule has been signed, interested parties will be able to download the rule from EPA's web site on the Internet under recently signed rules at the following address: (http://www.epa.gov/ttn/oarpg/rules.html). For further information about the proposal, contact Mr. Bob Lucas of EPA's Office of Air Quality Planning and Standards at (919) 541-0884.
- 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: (http://www.epa.gov/oar/).