

FACT SHEET

FINAL AIR TOXICS STANDARDS FOR POLYVINYL CHLORIDE AND COPOLYMERS (PVC) PRODUCTION

ACTION

- On February 13, 2012, the Environmental Protection Agency (EPA) issued a final rule to update emissions limits for air toxics from polyvinyl chloride and copolymers production (PVC production).
- The rule requires facilities that produce PVC to reduce emissions of harmful toxic air emissions, improving air quality and protecting public health in communities where these facilities are located.
- Exposure to toxic air pollutants can cause respiratory problems and other serious health issues, and can increase the risk of developing cancer. In particular, children are known to be more sensitive to the cancer risks posed by inhaling vinyl chloride, one of the known carcinogens emitted by this source category.
- The rule sets maximum achievable control technology (MACT) standards for major sources and generally available control technology (GACT) for area sources of PVC production. Emissions sources addressed in the rule include PVC process vents, stripped resin, equipment leaks, wastewater, heat exchangers, and storage vessels.
- The final rule sets emission limits and work practice standards for total organic air toxics, and also for three specific air toxics: vinyl chloride, chlorinated di-benzo dioxins and furans (CDDF), and hydrogen chloride. This is a change from the previous rule, which set an emission limit for vinyl chloride only, and used vinyl chloride as a surrogate for all other air toxics.
- PVC production includes the manufacture of resins that are used to make a large number of commercial and industrial products at other manufacturing facilities. These products include plastic end products, such as latex paints, coatings, adhesives, clear plastics, rigid plastics, and flooring.
- There are currently 15 major and two area source PVC facilities in the United States. They are located in eight states: Delaware (one), Illinois (one), Kentucky (one), Louisiana (six), Michigan (one), Mississippi (one), New Jersey (two) and Texas (four). There are no small businesses.
- PVC production does not include chemical manufacturing process units that produce vinyl chloride as the monomer, or other raw materials used in the PVC polymerization process.
- The review of existing data and consideration of new data have resulted in final emission limits that are more stringent than those currently regulating this industry. Since the final

emission limits are more stringent, the potential for future increases of harmful emissions is significantly decreased.

- The annual emission reductions from major sources are estimated to be 238 tons of total air toxics, 21 tons of hydrogen chloride, and 0.017 grams of CDDF. The annual emission reductions from area sources are 24 tons of total air toxics.
- To determine the emissions limits, EPA gathered information on PVC production through public comment, review of previously collected information, current literature, data from the National Emissions Inventory, and meetings and voluntary information submissions by industry and the industry trade association. Also, the Agency collected information from PVC production facilities, as well as co-located ethylene dichloride, vinyl chloride and PVC facilities, in the form of an electronic survey and emission testing of toxic air pollutants.
- For major sources, EPA estimates an overall total capital investment of \$18 million to meet the rule requirements, with associated annual costs of \$4 million per year. For area sources, EPA estimates an overall total capital investment of \$485,000 to meet the rule requirements, with associated annual costs of \$167,000 per year.
- To examine potential environmental justice issues, EPA performed a demographic analysis of individuals living near PVC facilities for different social, demographic and economic groups. The national average percent of the population below poverty and under age 18 living near PVC facilities are similar to their respective national averages. The average percent of minority population living within 3 miles of these facilities is about 6 percentage points above the national average.
- The final rule replaces the previous rule for larger emitting PVC production facilities (major sources) EPA issued in July 2002. That rule was vacated by the District of Columbia Circuit Court as a result of a petition. The final rule also amends the existing air toxic rule for smaller emitting PVC production facilities (area sources) that EPA issued in 2007.

BACKGROUND

- The Clean Air Act requires EPA to regulate toxic air pollutants, also known as air toxics, from large industrial facilities, and to set MACT standards for major sources and GACT standards for area sources.
- A major source facility emits or has the potential to emit 10 or more tons per year (tpy) of any single air toxic, or 25 tpy or more of any combination of air toxics.
- An area source facility emits or has the potential to emit less than 10 tpy of any single air toxic, and less than 25 tpy of any combination of air toxics.
- EPA issued MACT standards for the PVC source category in July 2002, based on the existing risk-based rule for vinyl chloride that the Agency issued in 1976. The MACT used

vinyl chloride as a surrogate for all other hazardous air pollutants.

- The PVC and copolymer MACT was vacated by the District of Columbia Circuit Court of Appeals on June 18, 2004, in response to the *Mossville Environmental Action Now (MEAN) v. EPA* petition.
- The Court ruling ordered EPA to reconsider or properly explain the methodology for using vinyl chloride as a surrogate to regulate all other hazardous air pollutants.
- In October 2008, MEAN, Louisiana Environmental Action Network, and Sierra Club filed a petition requesting a schedule for EPA to propose and promulgate regulations (MACT) for the PVC source category. EPA entered into a settlement agreement with Sierra Club to propose a new PVC MACT rule by October 29, 2010, and have a final rule signed by July 31, 2011.
- EPA sought, and the litigants granted, an extension for the proposed rule until April 15, 2011, and for the final rule until February 13, 2012.

FOR MORE INFORMATION

- Interested parties can download the notice from EPA's web site at the following address: <http://www.epa.gov/ttn/oarpg/t3pfpr.html>.
- The final rule and other background information are also available either electronically at <http://www.regulations.gov>, EPA's electronic public docket and comment system, or in hardcopy at the EPA Docket Center's Public Reading Room.
 - The Public Reading Room is located in the EPA Headquarters Library, Room Number 3334 in the EPA West Building, located at 1301 Constitution Avenue, NW, Washington, DC. Hours of operation are 8:30 a.m. to 4:30 p.m. eastern standard time, Monday through Friday, excluding Federal holidays.
 - Visitors are required to show photographic identification, pass through a metal detector, and sign the EPA visitor log. All visitor materials will be processed through an X-ray machine, as well. Visitors will be provided a badge that must be visible at all times.
 - Materials for this action can be accessed using Docket ID No. EPA-HQ-OAR-2002-0037.
- For further information, contact Jodi Howard of the EPA's Office of Air Quality Planning and Standards by phone at (919) 541-4607, or by e-mail at howard.jodi@epa.gov.