

FACT SHEET

PROPOSED AIR TOXICS STANDARDS FOR INDUSTRIAL, COMMERCIAL, AND INSTITUTIONAL BOILERS AND PROCESS HEATERS AT MAJOR SOURCE FACILITIES

ACTION

- On April 29, 2010, the Environmental Protection Agency (EPA) issued a proposed rule that would reduce emissions of toxic air pollutants from new and existing industrial, commercial, and institutional boilers and process heaters at major source facilities. 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.
- The proposed rule would reduce emissions of a number of toxic air pollutants, including mercury, other metals, and organic air toxics, which include polycyclic organic matter (POM) and dioxins.
- This rule will apply to two types of units, neither of which burn solid waste:
 - Boilers, which burn natural gas, fuel oil, coal, biomass (e.g., wood), refinery gas, or other gas to produce steam. The steam is used to produce electricity or provide heat.
 - Process heaters, which heat raw or intermediate materials during an industrial process.
- Boilers and process heaters are used at industrial facilities such as refineries, chemical and manufacturing plants, and paper mills and may stand alone to provide heat for commercial facilities such as shopping malls or institutional facilities such as universities. Most major source boilers and process heaters are located at industrial facilities.
 - EPA has identified 11 different subcategories of boilers and process heaters based on the design of the various types of units. The proposed rule would include specific requirements for each subcategory.
- This rulemaking will reduce toxic air pollutants, also known as hazardous air pollutants or air toxics. These pollutants are known or suspected to cause cancer and other serious health and environmental effects.
 - In 2013, EPA estimates 1,900 to 4,800 premature deaths would be avoided by implementing this proposed rule.
 - The rule would cut emissions of pollutants that are of particular concern for children. Mercury and lead can adversely affect developing brains – including effects on IQ, learning, and memory.
 - The rule would also reduce emissions of other pollutants including cadmium, dioxin, furans, formaldehyde and hydrochloric acid. These pollutants can cause cancer or other adverse health effects in adults and children.
 - Mercury, lead, dioxin, and furans can build up in the environment, causing serious environmental effects and harm to the food chain as well.

- EPA will accept comment on the proposal for 45 days after publication in the Federal Register. Also, EPA will hold a public hearing on this rule. Details will be posted at www.epa.gov/airquality/combustion as they become available.

PROPOSED REQUIREMENTS

- For all new and existing natural gas- and refinery gas-fired units, the proposed rule would establish a work practice standard instead of emission limits. The operator would be required to perform an annual tune-up for each unit.
- For all existing units with a heat input capacity less than 10 million British thermal units per hour (MMBtu/hr), the proposed rule would establish a work practice standard instead of emission limits. The operator would be required to perform a tune-up for each unit once every two years.
- Existing major source facilities would also be required to conduct an energy assessment to identify cost-effective energy conservation measures.
- The proposed rule would establish emission limits for all other existing and new boilers and process heaters located at major sources. The proposal would establish emission limits for:
 - mercury,
 - dioxin,
 - particulate matter (PM) (as a surrogate for non-mercury metals),
 - hydrogen chloride (HCl) (as a surrogate for acid gases), and
 - carbon monoxide (CO) (as a surrogate for non-dioxin organic air toxics)

BENEFITS AND COSTS

- EPA estimates that there are approximately 13,555 boilers and process heaters at major sources in the United States and that approximately 46 new units would be installed over the next 3 years.
- EPA estimates that implementation of the rulemaking, as proposed, would reduce nationwide emissions from major source boilers and process heaters by:
 - 15,000 pounds per year of mercury,
 - 3,200 tpy of non-mercury metals,
 - 37,000 tpy of HCl,
 - 50,000 tpy of PM,
 - 340,000 tpy of SO₂, and
 - 722 grams per year of dioxin
 - 1,800 tpy of volatile organic compounds
- These emissions reductions would lead to the following annual health benefits. In 2013, this rule will protect public health by avoiding:
 - 1,900 to 4,800 premature deaths,
 - 1,300 cases of chronic bronchitis,
 - 3,000 nonfatal heart attacks,
 - 3,200 hospital and emergency room visits,

- 3,000 cases of acute bronchitis,
 - 250,000 days when people miss work,
 - 33,000 cases of aggravated asthma, and
 - 1,500,000 acute respiratory symptoms.
- The value of the benefits ranges from \$17 billion to \$41 billion in 2013 – outweighing the costs by at least \$14 billion.
 - EPA estimates the total national capital cost for the final rule to be approximately \$9.5 billion in the year 2013, with a total national annual cost of \$2.9 billion in the year 2013. The annual cost, which considers fuel savings, includes control device operation and maintenance as well as monitoring, recordkeeping, reporting, and performance testing.

THREE SEPARATE BUT RELATED ACTIONS

- EPA has proposed a rule that would reduce emissions of toxic air pollutants from new and existing industrial, commercial, and institutional boilers and process heaters located at *area* source facilities. An area source facility has the potential to emit less than 10 tpy of any single air toxic or less than 25 tpy of any combination of air toxics. (<http://epa.gov/airquality/combustion/actions.html>)
- EPA has proposed a definition of solid waste. The definition could potentially affect some units currently considered boilers by moving them into category of commercial and industrial solid waste incinerators if they burn solid waste. (<http://www.epa.gov/wastes/nonhaz/definition.htm>)
- EPA has also proposed a rule to reduce air toxics from Commercial and Industrial Solid Waste Incinerators (CISWI). This proposed rule reflects the Agency’s proposed definition of solid waste. (<http://epa.gov/airquality/combustion/actions.html>)

BACKGROUND

- The CAA requires EPA to develop rules to reduce air toxics emissions from categories of facilities that emit one or more of 187 listed toxic air pollutants. These rules require the application of strict emissions controls known as maximum achievable control technology.
- EPA identified industrial boilers, commercial and institutional boilers, and process heaters as categories of major sources for which emission standards must be developed.
- The schedule for completing this rule is part of a court order, which requires the EPA Administrator to complete a final rule by December 16, 2010.
 - On September 13, 2004, EPA promulgated national emission standards for hazardous air pollutants for new and existing industrial/commercial/institutional boilers and process heaters.
- On June 19, 2007, the United States Court of Appeals for the District of Columbia Circuit vacated and remanded the 2004 standards. The court held that EPA incorrectly included boilers that combust solid waste in the development of the standards. The court stated that

any unit that combusts solid waste may not be included in the development of standards for boilers.

HOW TO COMMENT

- EPA will accept comment on the proposal for 45 days after publication in the Federal Register. Comments, identified by Docket ID No. EPA-HQ-OAR-2002-0058, may be submitted by one of the following methods:
 - www.regulations.gov: Follow the on-line instructions for submitting comments.
 - E-mail: Comments may be sent by electronic mail (e-mail) to a-and-r-Docket@epa.gov.
 - Fax: Fax your comments to: 202-566-1741.
 - Mail: Send your comments to: Air and Radiation Docket and Information Center, Environmental Protection Agency, Mail Code: 2822T, 1200 Pennsylvania Ave., NW, Washington, DC, 20460.
 - Hand Delivery or Courier: Deliver your comments to: EPA Docket Center, Room 3334, 1301 Constitution Ave., NW, Washington, DC, 20460. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

FOR MORE INFORMATION

- To download this proposed rule from EPA's Web site, go to Recent Actions at <http://www.epa.gov/ttn/oarpg/new.html>.
- Today's action 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 at EPA Headquarters, room number 3334 in the EPA West Building, 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 proposed action can be accessed using Docket ID No. EPA-HQ-OAR-2002-0058.
- For further information about the proposal, contact Mr. Brian Shrager of EPA's Office of Air Quality Planning and Standards, Sector Policies and Programs Division, Energy Strategies Group at (919) 541-7689 or by e-mail at shrager.brian@epa.gov.