

## FACT SHEET

### FINAL ADJUSTMENTS TO THE AIR TOXICS STANDARDS FOR INDUSTRIAL, COMMERCIAL, AND INSTITUTIONAL BOILERS AT AREA SOURCE FACILITIES

#### ACTION

- On December 20, 2012, the U.S. Environmental Protection Agency (EPA) finalized a specific set of adjustments to Clean Air Act standards, originally finalized in March 2011, for boilers and certain solid waste incinerators.
  - These adjustments maintain extensive public health protections achieved by the March 2011 standards by reducing toxic air pollution, including mercury and particle pollution.
  - At the same time, these adjustments increase the rules' flexibility and address concerns raised by stakeholders.
  - The specific set of adjustments address new data provided to the agency and additional information about real-world performance and conditions under which affected boilers and incinerators operate.
  - These adjustments maintain the dramatic cuts in the cost of implementation that were achieved in the final standards issued in March 2011.
- This fact sheet summarizes the final adjustments to the "National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers."
- Boilers burn coal and other substances such as oil or biomass (e.g., wood) to produce steam and/or hot water, which is then used for energy or heat. They can also burn non-waste materials but do so usually only in small amounts.
  - Industrial boilers are used in manufacturing, processing, mining, refining or any other industry.
  - Commercial and institutional boilers are used in commercial establishments, medical centers, educational facilities and municipal buildings.
  - The majority of area source boilers covered by this rule are located at commercial and institutional facilities.
- The final adjustments do not change the intended coverage of the air toxics standards for industrial, commercial, and institutional boilers and will not affect the estimated emission reductions, control costs or the benefits of the standards in substance. The adjustments do not impose any additional regulatory requirements beyond those imposed by the previously promulgated boiler area source standards and, in fact, will afford relief to some boilers.
- There are approximately 1.3 million boilers located at areas source facilities that run on natural gas. They are not covered by the final standards or these adjustments. The area source standards covers approximately 183,000 boilers located at 92,000 area source facilities. Of the 183,000 covered units, approximately 182,400 (over 99%) need only to conduct periodic tune-ups, and some of these also need to perform a one-time energy assessment. Approximately 600 coal-burning units (less than 1%), that represent the largest of these sources, are required to meet emission limits.
- These adjustments will make it easier for owners and operators, as well as state and local agencies,

to understand and implement the applicable requirements of the air toxics standards.

## **ADJUSTMENTS TO FINAL STANDARDS**

- EPA is issuing adjustments to the March 2011 standards based on evaluation of additional information provided to the agency since that time, including the following key changes:
  - Extending by two years the initial compliance date for existing area source boilers subject to the tune-up requirement.
  - Revising the deadline for initial notification for existing area source boilers to no later than January 20, 2014.
  - Revising provisions for existing dual-fuel fired units that fuel switch from gas to coal, biomass or oil such that they would still be considered existing sources.
  - Providing subcategories for seasonally-operated boilers and limited-use boilers.
  - Requiring tune-ups every five years, instead of every two, for certain area source boilers: seasonally-operated units, limited-use units, small oil-fired units and units with oxygen trim systems.
  - Clarifying that temporary boilers and residential boilers are not part of the source categories being regulated.
  - Revising particulate matter (PM) emission limit requirements such that combustion of oil meeting certain sulfur content requirements by new oil-fired boilers is considered an alternative method of meeting the PM emission standard and that such units are not required to meet the PM emission limit.
  - Reducing the fuel sampling and performance testing requirements such that after demonstration of initial compliance, under certain circumstances, further fuel sampling for boilers subject to a mercury emission limit and further PM performance testing for boilers subject to a PM emission limit is not required.
  - Providing the option of continuous emissions monitoring to demonstrate continuous compliance with the carbon monoxide (CO) emission limit.
  - More clearly defining the scope of the energy assessment and allowing for more streamlined assessments, including allowing sources already operating under certain energy management programs to satisfy the assessment requirement.

## **BENEFITS AND COSTS**

- The benefits and costs for these adjustments are, in substance, the same as those for the March 2011 final standards.
- EPA estimates that the final standards will reduce nationwide emissions from existing and new area source boilers by approximately:
  - 330 tons per year (tpy) of total air toxics,
  - 90 pounds per year of mercury,
  - 320 tpy of non-mercury metals,
  - 9 tpy of polycyclic organic matter, and
  - 2,500 tpy of PM.
- These emission reductions will lead to significant annual health benefits. In 2014, these standards will protect public health by avoiding:

- 24 to 61 premature deaths,
  - 17 cases of chronic bronchitis,
  - 40 nonfatal heart attacks,
  - 40 hospital and emergency room visits,
  - 38 cases of acute bronchitis,
  - 800 cases of respiratory symptoms,
  - 3,200 days when people miss work or school,
  - 420 cases of aggravated asthma, and
  - 19,000 days when people must restrict their activities.
- EPA estimates that the value of the benefits associated with reduced exposure to fine particles are \$210 million to \$520 million in the year 2015.
  - EPA is not able to estimate the benefits associated with reducing exposure to air toxics or other air pollutants, ecosystem effects, or visibility impairment because of data limitations. However, the standards will 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 vast majority of area source boilers are estimated to be located at commercial and institutional facilities and generally owned or operated by small entities. EPA has limited the impact of the rulemaking on small entities by requiring that only existing coal-fired boilers meet emission limits for mercury and CO, establishing work practices or management practices, instead of emission limits, for existing small coal-fired boilers of less than 10 million British thermal units per hour of heat input and all existing biomass boilers and oil-fired boilers, and exempting most area source boilers from Clean Air Act (CAA) Title V permit requirements.
    - EPA estimates that approximately 6,800 new area source boilers will be installed over the next 3 years.
  - EPA estimates that the cost for the final standards will be approximately \$490 million per year. This includes costs we expect industry to incur to comply as well as the standards' broader impact on the economy. We do not expect that these adjustments will result in any meaningful increase in the estimated costs to comply with the standards but will result in a decrease in burden on small facilities.

#### **SEPARATE BUT RELATED ACTIONS**

- EPA has finalized adjustments to the rule to reduce emissions of toxic air pollutants from new and existing industrial, commercial and institutional boilers and process heaters located at *major* source facilities. A major source facility has the potential to emit more than 10 tpy of any single air toxic or more than 25 tpy of any combination of air toxics.
- EPA has also finalized adjustments to a rule to reduce air toxics from Commercial and Industrial Solid Waste Incinerators (CISWI). This final rule reflects the agency's final definition of *non-hazardous* solid waste.
- EPA revised the non-hazardous secondary materials (NHSM) rule. This rule provides the standards and procedures for identifying whether non-hazardous secondary materials are solid waste under

the Resource Conservation and Recovery Act when used as fuels or ingredients in combustion units such as boilers or solid waste incinerators.

- Information on these actions is available at <http://www.epa.gov/airquality/combustion/actions.html>.

## BACKGROUND

- On March 21, 2011, EPA promulgated national air toxics standards for area source industrial, commercial and institutional boilers. On the same day, EPA also promulgated national air toxics standards for major source industrial, commercial, and institutional boilers and for CISWI.
- On March 21, 2011, EPA also published a notice initiating the reconsideration of certain aspects of the final rule for area source industrial, commercial and institutional boilers, as well as the final rules for major source industrial, commercial, and institutional boilers and for CISWI. The final rules reflect reasonable approaches consistent with the requirements of the CAA. However, some of the issues identified in comments on the 2010 proposed rules raised difficult technical issues that the agency believed would benefit from additional public involvement. In addition, the agency wanted to ensure the public had ample opportunity to comment on changes in the final rule that were not in the proposal.
- In the March 21, 2011 notice initiating reconsideration, EPA identified four issues for the area source boilers rule for which reconsideration and additional opportunity for public review and comment should be given. These included:
  - Establishment of standards for biomass and oil-fired area source boilers based on generally available control technology (GACT);
  - Providing an affirmative defense for malfunction events for area source boilers;
  - Setting PM standards under GACT for oil-fired area source boilers; and
  - Certain findings regarding the applicability of title V permitting requirements for area source boilers.
- Following promulgation, EPA received petitions for reconsideration of certain provisions in the final rule and, on December 23, 2011, EPA published a notice proposing reconsideration of, and requesting comment on, certain specific issues:
  - Establishing separate requirements for seasonally operated boilers;
  - Clarifying that temporary boilers are excluded from the source category;
  - Clarifying the initial compliance schedule for existing boilers subject to tune-ups;
  - Defining periods of gas curtailment;
  - Providing an optional CO compliance mechanism using a continuous emission monitoring system (CEMS);
  - Averaging times for parameter monitoring;
  - Providing an affirmative defense for malfunction events;
  - Adjusting frequency of tune-up work practices for very small units;
  - Selecting a 99 percent confidence interval for setting the CO emission limit;
  - Establishing GACT-based limits for biomass and oil-fired boilers;
  - Scope and duration of the energy assessment and deadline for completing the assessment;
  - Establishing GACT-based limits for PM at new oil-fired boilers; and
  - Exempting area sources from title V permitting requirements.

## FOR MORE INFORMATION

- To download this notice from EPA's Web site, go to:  
<http://www.epa.gov/airquality/combustion/actions.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 in the EPA Headquarter Library, 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 action can be accessed using Docket ID No. EPA-HQ-OAR-2008-0790.
- For further information about the rule, contact Ms. Mary Johnson of the EPA's Office of Air Quality Planning and Standards, Sector Policies and Programs Division, Energy Strategies Group, at (919) 541-5025 or by e-mail at [johnson.mary@epa.gov](mailto:johnson.mary@epa.gov).