

FACT SHEET

FINAL RULE TO REDUCE AIR TOXICS EMISSIONS FROM AREA SOURCE ELECTRIC ARC FURNACE STEELMAKING FACILITIES

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ACTION

- On December 14, 2007, the Environmental Protection Agency (EPA) issued air toxics standards for smaller emitting sources, called area sources, that use electric arc furnaces (EAFs) in steel manufacturing. EAFs melt scrap steel to be recycled into bulk steel.
- The Clean Air Act defines two types of stationary sources that emit air toxics: major sources and area sources. This rule regulates smaller emitting EAFs as area sources.
- Area sources are smaller commercial and industrial operations that release lesser quantities of toxic pollutants into the air. Area sources emit less than 10 tons per year of a single air toxic, or less than 25 tons per year of a combination of air toxics. Sources that emit more than these amounts are characterized as "major" sources.
- This rule reduces mercury emissions by requiring that EAF steelmakers buy motor vehicle scrap from providers that participate in an EPA-approved program for the removal of mercury switches.
- This rule also reduces emissions of other toxic metal compounds by limiting particulate matter (PM) emissions as a surrogate. Facilities that produce less than 150,000 tons per year (tpy) of stainless or specialty steel need to comply with an emissions limit of 0.8 pounds of PM per ton of steel. All other facilities are required to meet a PM limit of 0.0052 grains per dry standard cubic foot. A 6 percent opacity limit applies to fugitive emissions from EAFs.
- Existing area sources affected by the rule are generally well-controlled by other EPA and state regulations. As a result, only a few existing facilities will be required to install additional emission controls or upgrades to existing controls to comply with the standards.
- This rule reduces emissions of toxic air pollutants such as mercury, lead, manganese, nickel, and chromium. These chemicals are known or suspected to cause cancer, other serious health problems and environmental damage. EPA estimates total annual air toxic reductions of about 57 tons per year (tpy), including 5 tpy of mercury, and PM emissions by about 865 tpy.
- Total annualized cost would be approximately \$13 million per year on existing facilities covered under this rule. Capital costs would be about \$69 million.

BACKGROUND

- The Clean Air Act requires EPA to identify categories of industrial sources that emit one or more of 187 listed toxic air pollutants. These industrial categories include both major and area sources.
- For major sources within each source category, the Clean Air Act requires EPA to develop standards that restrict emissions to levels consistent with the lowest-emitting (also called best-performing) plants. Major sources are those that emit 10 tons a year or more of a single toxic air pollutant or 25 tons a year or more of a combination of air toxics.
- For area sources within each source category, the Clean Air Act allows EPA to develop standards or requirements which provide for the use of generally available control

- technologies (GACT) or management practices rather than the maximum achievable control technology (MACT) required for major sources.
- Further, the Clean Air Act requires EPA to (1) identify the toxic air pollutants that pose the greatest threat to public health in urban areas and (2) identify and list the area source categories that represent 90 percent of the emissions of the urban air toxics associated with area sources and regulate them to ensure that the emissions of these "urban" air toxics are reduced. EPA implements these requirements through the Integrated Urban Air Toxics Strategy.
 - EPA published the Strategy on July 19, 1999, in the Federal Register that included:
 - A list of the 33 air toxics that present the greatest threat to public health in the largest number of urban areas. Of these 33 urban air toxics, EPA has identified the 30 with the greatest contribution from smaller commercial and industrial operations or "area" sources, as defined in the Clean Air Act. (See <http://www.epa.gov/ttn/atw/urban/list33.html> for the full list.)
 - A list of 29 area source categories that contribute to the emissions of these 30 listed air toxics. Subsequent notices published on June 26 and November 22, 2002, added 41 source categories to this list of area sources and fulfilled the Clean Air Act requirement to identify and list area source categories for at least 90 percent of the emissions of the 30 "listed" (or area source) HAPs. The EAF source category included in today's final rule is included in this list of area sources. For more information, go to <http://www.epa.gov/ttn/atw/urban/urbanpg.html>.
 - In addition, the Clean Air Act requires EPA to regulate source categories that account for at least 90 percent of emissions of seven specific air toxics due to their persistence and tendency to bioaccumulate in the environment. EAF steelmaking is listed as one of these source categories based on emissions of mercury. The mercury requirements in the rule reflect performance of the maximum achievable control technology (MACT) for EAF steelmaking facilities.
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FOR MORE INFORMATION

- To download a copy of the final rule, go to EPA's website at the following address: <http://www.epa.gov/ttn/oarpg/ramain.html>.
- For further information about the rule, contact Phil Mulrine of EPA's Office of Air Quality Planning and Standards at (919) 541-5289 or mulrine.phil@epa.gov.