

## FACT SHEET

### FINAL AMENDMENTS TO THE AIR TOXICS STANDARDS FOR FERROALLOYS PRODUCTION

#### ACTION

- On May 28, 2015, the Environmental Protection Agency (EPA) finalized amendments to the air toxics emissions standards covering facilities that produce ferroalloys. Ferroalloys are compounds that contain iron and other elements such as silicon, and manganese.
- This final action will require ferroalloy production facilities to:
  - capture at least 95 percent of fugitive emissions and route them to control devices;
  - use digital camera opacity technology for opacity monitoring;
  - meet mercury and polycyclic aromatic hydrocarbons (PAH) emission limits for ferromanganese and silicomanganese production sources; and
  - continue to meet a strengthened particle pollution emission limit that reflects current performance of control devices in the industry.
- Facilities will have 2 years to comply with the promulgated standards.
- The estimated reductions in emissions of hazardous air pollutants (about 77 tons per year) will provide significant benefits to public health. This includes reductions in emissions of metals, such as manganese, nickel, chromium, cadmium, and lead; mercury; PAHs; and fine particles (PM<sub>2.5</sub>).
- EPA issued the initial air toxics standards for ferroalloy production in May 1999. These standards currently cover two existing facilities, one in West Virginia, and one in Ohio. This review of the standards, known as a risk and technology review, evaluated:
  - If better, new, improved or previously unidentified emission control approaches, practices or processes were available,
  - Whether additional emission reductions were warranted to protect health, and
  - If additional changes were needed to assure that the rule was accurate and legally defensible.

#### **Technology Review**

- The Clean Air Act requires EPA to review and revise air toxics standards, as necessary, taking into account developments in practices, processes, and control technologies since EPA issued the standards.
- EPA has reevaluated control options for fugitive air toxic metal emissions. Fugitive emissions come from leaks in process equipment, pipes, and valves rather than stacks or vents. The Agency has concluded that capturing these emissions, using a combination of primary and secondary hooding, is an effective method of control.
- Primary hooding involves placing, very close to an emissions source, collection devices

(hoods) that would capture fugitive emissions immediately after they are released. Secondary hoods would be located higher in the building, near the roofline, to capture the remaining fugitive emissions that are not captured by the primary hoods.

- EPA also conducted additional analyses regarding costs and effectiveness of activated carbon injection for mercury and PAH control.

### **Residual Risk Assessment**

- The Clean Air Act requires EPA to assess the risk remaining after application of the final air toxic standards. This is known as a residual risk assessment.
- The residual risk assessment included the following analyses:
  - Risk estimates based on the actual emissions reported as emitted.
  - Risk estimates based on emissions allowed by the current air toxics standards.
  - Analysis of air-toxics related risks across different social, demographic and economic groups living near the facilities.
- After assessing the risk from exposure via inhalation and other routes to toxic air emissions from ferroalloys production, EPA found the risks unacceptable. EPA considered all risk assessment results including:
  - The noncancer inhalation hazard quotient range of 4 (for actual emissions) to 40 (for allowable emissions) indicates the potential for the public to be exposed to manganese concentrations greater than the reference level.
  - The noncancer multipathway hazard quotient of 1 is at the reference level for daily exposure to mercury via fish ingestion; and
  - The lifetime cancer risk estimate ranges from 20-in-1 million (for actual emissions) to 100-in-1 million (for allowable emissions). While 20-in-1 million is well within the acceptable range, 100-in-1 million is at the upper end of acceptability.
- The emission controls required in this action will lower emissions from fugitive and stack sources. This will reduce cancer and noncancer risk to acceptable levels and protect public health with an ample margin of safety.

### **BACKGROUND**

- In the Ferroalloys Production source category, there are two main products. Ferromanganese is a ferroalloy with a high concentration of manganese and iron, and silicomanganese is a ferroalloy with a high concentration of manganese and silicon. Both products are used in steelmaking and foundry activities.
- The Clean Air Act requires the EPA to regulate toxic air pollutants, also known as air toxics, from large industrial facilities in two phases.
- The first phase is “technology-based,” where EPA develops standards for controlling the

emissions of air toxics from sources in an industry group (or “source category”). These maximum achievable control technology (MACT) standards are based on emissions levels that are already being achieved by the controlled and low-emitting sources in an industry.

- The second phase is a “risk-based” approach called residual risk. Here, EPA must determine whether more health-protective standards are necessary. Within 8 years of setting the MACT standards, the Clean Air Act directs EPA to assess the remaining health risks from each source category to determine whether the MACT standards protect public health with an ample margin of safety, and protect against adverse environmental effects.
- Every 8 years after setting the MACT standards, the Clean Air Act requires that EPA review and revise the standards, if necessary, to account for improvements in air pollution controls and/or prevention.

### **FOR MORE INFORMATION**

- Interested parties can download the notice from the EPA's web site at the following address: <http://www.epa.gov/ttn/atw/ferroa/ferropg.html>.
- Today’s final rule and other background information are also available either electronically at <http://www.regulations.gov>, the 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 WJC 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 proposed action can be accessed using Docket ID Number EPA-HQ-OAR-2010-0895.
- For further information, contact Phil Mulrine of the EPA’s Office of Air Quality Planning and Standards by phone at (919) 541-5289, or by e-mail at: [mulrine.phil@epa.gov](mailto:mulrine.phil@epa.gov).