

**PROPOSED AMENDMENTS TO AIR TOXICS STANDARDS FOR PHOSPHORIC
ACID MANUFACTURING AND PHOSPHATE FERTILIZER PRODUCTION AND
STANDARDS OF PERFORMANCE FOR PHOSPHATE PROCESSING
FACT SHEET**

ACTION

- On October 21, 2014, the Environmental Protection Agency (EPA) issued proposed amendments to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Phosphoric Acid Manufacturing and Phosphate Fertilizer Production, and to the Standards of Performance (NSPS) for Phosphate Processing.
- EPA promulgated standards for phosphoric acid manufacturing and phosphate fertilizer production in 1999. Both standards have undergone minor revisions since that time. The two standards have historically been done concurrently as the sources are typically co-located. Currently 13 facilities are subject to at least one of the rules. Ten of the 13 facilities are considered to be in both source categories.
- Phosphoric acid is manufactured through the acidulation of phosphate ore. Typically, sulfuric acid, phosphate ore and water are reacted with one another to produce phosphoric acid and gypsum. Gypsum is a waste by-product from the reaction, and it is stored on facility property in large mounds. Most of the phosphoric acid produced domestically is used in phosphate fertilizer production. Phosphate fertilizer is produced through three basic steps: reaction of phosphoric acid with ammonia, granulation and finishing processes.
- Following a residual risk review and technology review for both source categories as well as overall review of the standards, the EPA is proposing the following actions:
 - Establishing an emission limit for previously unregulated mercury emissions from calciners at new and existing phosphoric acid plants (0.014 mg/dscm at 3 percent oxygen).
 - Establishing work practice standards to control hydrogen fluoride (HF) emissions from calciners and from gypsum dewatering ponds and cooling ponds at phosphoric acid plants.
 - Removing startup, shutdown and malfunction exemptions and add work practice standards to address periods of startup and shutdown.
 - Modifying and correct testing and monitoring provisions.
 - Clarifying the applicability for emission points covered by the phosphoric acid manufacturing and phosphate fertilizer production source categories.

- EPA also reviewed several New Source Performance Standards (NSPS) that are applicable to these industries. We are proposing no changes to the existing NSPS as a result of that review.
- EPA will accept comment on these proposed amendments for 45 days following publications in the Federal Register.

Residual Risk Assessment

- The Clean Air Act requires the EPA to assess the risk remaining after application of the final air toxics standards. This is known as a residual risk assessment.

Phosphoric Acid Manufacturing

- After assessing the risk from exposure to toxic air emissions from phosphoric acid manufacturing, EPA proposes that risks are acceptable and that the 1999 emissions standards protect public health with an ample margin of safety.
 - The lifetime cancer risk estimate is well below 1-in-1 million.
 - The noncancer hazard index (HI) for this source category is 0.2 and is driven by HF emissions. No facility had an HI greater than 1. EPA does not expect any adverse, noncancer health effects to occur.
 - The maximum acute hazard quotient (HQ) for phosphoric acid manufacturing is 2, with HF being the risk driver. However, the public has limited access to where emissions associated with the maximum HQ occur and is not likely to be exposed.

Phosphate Fertilizer Production

- After assessing the risk from exposure to toxic air emissions from phosphate fertilizer production, EPA proposes that risks are acceptable and that the 1999 emissions standards protect public health with an ample margin of safety.
 - The lifetime cancer risk estimate is well below 1 in-1 million.
 - The noncancer HI for this source category is 0.2 and is driven by manganese compound emissions. No facility had an HI greater than 1.
 - The maximum acute HQ for this source category is less than 1.

Technology Review

- The Clean Air Act requires the EPA to review and revise air toxics standards, as necessary, taking into account developments in practices, processes and control technologies since the EPA issued the standards.
- The technology assessment did not identify any cost-effective developments in practices, processes or control technology for either of the source categories.

BACKGROUND

- The Clean Air Act requires the EPA to regulate toxic air pollutants, also known as air toxics, from categories of industrial facilities in two phases.
- The first phase is “technology-based,” where the EPA develops standards for controlling the emissions of air toxics from sources in an industry group (or “source category”). These MACT standards are based on emissions levels that are already being achieved by the best-controlled and lower-emitting sources in an industry.
- Within eight years of setting the MACT standards, the Clean Air Act directs the 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. This second phase is a “risk-based” approach called residual risk. Here, the EPA must determine whether more health-protective standards are necessary.
- Also, every eight years after setting the MACT standards, the Clean Air Act requires that the EPA review and revise the standards, if necessary, to account for improvements in air pollution controls and/or prevention.
- The previously-issued air toxic standards for this source category is one of 96 air toxic standards (MACT) that require 174 industry sectors to eliminate 1.7 million tons of 187 toxic air pollutants. Congress listed these toxic air pollutants in the Clean Air Act.

HOW TO COMMENT

- The EPA will accept comment on the proposal for 45 days after publication in the Federal Register. Comments, identified by Docket ID Number EPA-HQ-OAR- 2012-0522 may be submitted by one of the following methods:
 - Go to www.regulations.gov and follow the on-line instructions for submitting comments.
 - Send comments by email to a-and-r- Docket@epa.gov, Attention Docket ID No.EPA-HQ-OAR-2012-0522.
 - Fax your comments to: 202-566-9744, Attention Docket ID. No. EPA-HQ-OAR-2012-0522.
 - Mail your comments to: Air and Radiation Docket and Information Center, Environmental Protection Agency, Mail Code: 28221T, 1200 Pennsylvania Ave., NW, Washington, DC, 20460, Attention Docket ID. No. EPA-HQ-OAR-2012-0522.

- Deliver comments in person to: EPA Docket Center, 1301 Constitution Ave., NW, Room 3334, Washington, D.C. Note: In person deliveries (including courier deliveries) are only accepted during the Docket's normal hours of operation. Special arrangements should be made for deliveries of boxed information.

FOR MORE INFORMATION

- To download a copy of the proposed rule notice, go to EPA's Worldwide Web site at <http://www.epa.gov/ttn/atw/phosph/phosphpg.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 WJC 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-2012-0522.

For further technical information about the rule contact Tina Ndoh of EPA's Office of Air Quality Planning and Standards at (919) 541-2750 or Ndoh.tina@epa.gov.