

FACT SHEET

Final Amendments to Air Toxics Standards for Ethylene Production

ACTION

- On March 12, 2020, the US. Environmental Protection Agency (EPA) finalized amendments to the 2002 Ethylene Production National Emission Standards for Hazardous Air Pollutants (NESHAP).
- The Ethylene Production NESHAP includes the following emission sources at ethylene production facilities: storage vessels, ethylene process vents, transfer racks, equipment leaks, heat exchange systems, waste operations and ethylene cracking furnaces (and associated decoking operations).
- Following a residual risk and technology review conducted under the Clean Air Act (CAA), EPA is finalizing:
 - correcting and clarifying regulatory provisions related to emissions during periods of startup, shutdown and malfunction (SSM), including eliminating exemptions during periods of SSM, and finalizing alternative work practice standards for certain SSM events including for PRD releases, visible emissions from flares operating above their smokeless capacity, decoking of ethylene cracking furnaces, and storage vessel degassing operations;
 - strengthening the heat exchange system requirements;
 - adding monitoring and operational requirements for flares; and
 - requiring facilities to submit electronic copies of compliance reports and performance test results and reports.
- EPA estimates the proposed technology review amendments will achieve hazardous air pollutant (HAP) emission reductions of 29 tons per year.
- EPA also estimates that excess emissions of HAP from flares will be reduced by another 1,430 tons per year.

RESIDUAL RISK ASSESSMENT

- The CAA requires EPA to assess the risk remaining after application of the final air toxics standards. This is known as a residual risk assessment.
- Based on the completed risk assessment, available health information and associated uncertainties, EPA is finalizing its determination that risks from the Ethylene Production source category are acceptable and that the standards provide an ample margin of safety to protect public health.
- The maximum individual cancer risk for inhalation is estimated to be 100-in-1 million for the Ethylene Production source category.

TECHNOLOGY REVIEW

- The CAA also requires EPA to assess, review and revise the air toxics standards as

necessary, taking into account developments in practices, processes and control technologies since the standards were first issued.

- The technology review assessment for ethylene production identified cost-effective developments for heat exchange systems that will reduce emissions of air toxics.

BACKGROUND

- The CAA requires EPA to regulate hazardous air pollutants, also known as air toxics, from categories of 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 best-controlled and lower-emitting sources in an industry.
- Within eight years of setting MACT standards, the CAA 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. This second phase is a “risk-based” approach called residual risk. Here, EPA must determine whether more health-protective standards are necessary.
- Also, every eight years after setting MACT standards, the CAA requires that EPA review and revise the standards, if necessary, to account for improvements in air pollution controls and/or prevention.

FOR MORE INFORMATION

- To download a copy of the final rule, go to EPA’s website at <https://www.epa.gov/stationary-sources-air-pollution/acetal-resins-acrylic-modacrylic-fibers-carbon-black-hydrogen>.
- Today’s action notice and other background information are also available either electronically at <https://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 the EPA Headquarters library, room number 3334 in the 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 final action can be accessed using Docket ID No. EPA-HQ- OAR-2017-0357.
- For further technical information about the rule, contact Andrew Bouchard at EPA's Office of Air Quality Planning and Standards, at (919) 541-4036 or at bouchard.andrew@epa.gov.