

FACT SHEET

Final Amendments to Air Toxics Standards for Cyanide Chemicals Manufacturing

ACTION

- On November 1, 2021, the U.S. Environmental Protection Agency (EPA) finalized amendments to the 2002 National Emission Standards for Hazardous Air Pollutants (NESHAP) for Cyanide Chemicals Manufacturing.
- Cyanide chemicals are hydrogen cyanide (HCN) and sodium cyanide (NaCN). Hydrogen cyanide is typically used to manufacture other chemicals while sodium cyanide is used in gold mining.
- Emission sources in the source category include process vents, storage vessels; equipment leaks; transfer operations; and wastewater.
- Following a residual risk and technology review (RTR) conducted under the Clean Air Act (CAA), EPA determined that risks from the source category are acceptable. Based on the technology review, EPA did not identify any developments under the technology review that would reduce emissions beyond the original NESHAP. However, EPA did identify previously unregulated emission sources in the source category during our technology review. EPA is addressing those unregulated emission sources as follows:
 - finalized requirements that process wastewater at existing sources must comply with wastewater requirements from the Hazardous Organic NESHAP (HON); and
 - revised the process wastewater new source standard to add the HON requirements for waste management units upstream of an open or closed biological treatment process to ensure demonstrable compliance measures are in place for these sources.
- EPA is finalizing other minor amendments to the rule, including:
 - revised regulatory provisions related to emissions during periods of startup, shutdown and malfunction; and
 - provisions for electronic reporting of certain notifications and reports.

RESIDUAL RISK ASSESSMENT

- The CAA requires EPA to assess the risk remaining after application of the final air toxics emissions standard. This is known as a residual risk assessment.
- The inhalation cancer maximum individual risk (MIR) based on actual emissions is 5-in-1 million for the Cyanide Chemicals Manufacturing source category.
- An MIR of 5-in-1 million implies that up to five people out of 1 million equally exposed people could contract cancer if exposed continuously (24 hours per day) to the specific concentration over 70 years (an assumed lifetime). This would be in addition to cancer cases that would normally occur in 1 million unexposed people.
- Additional health risk screenings and ecological risk screenings do not indicate levels of concern.

- EPA determined the remaining risk after application of the technology-based standards is acceptable, and the standards provide an ample margin of safety to protect public health and the environment.

TECHNOLOGY REVIEW

- The CAA requires EPA to assess, review and revise air toxics standards, as necessary, taking into account developments in practices, processes and control technologies.
- Based on the results of the technology review, EPA did not identify developments that would reduce HAP emissions beyond the original NESHAP.

BACKGROUND

- The CAA requires 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 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 8 years of setting the 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 8 years after setting MACT standards, the CAA requires EPA to review and revise the standards, if necessary, to account for improvements in air pollution controls and prevention practices and technologies.

FOR MORE INFORMATION

- Interested parties can download a copy of the final rule notice from EPA's website at the following address: <https://www.epa.gov/stationary-sources-air-pollution/acetal-resins-acrylic-modacrylic-fibers-carbon-black-hydrogen>.
- Today's action and other background information are also available electronically at <https://www.regulations.gov/>, EPA's electronic public docket and comment system.
 - Materials for this final action can be accessed using Docket ID No. EPA-HQ-OAR-2020-0532.
- For further technical information about the rule, contact Nathan Topham, EPA's Office of Air Quality Planning and Standards, at (919) 541-0483 or topham.nathan@epa.gov.