FINAL AMENDMENTS TO AIR TOXICS STANDARDS FOR PERCHLOROETHYLENE DRY CLEANERS FACT SHEET

ACTION

- On July 13, 2006, the Environmental Protection Agency (EPA) significantly strengthened air toxics requirements for all dry cleaners that use the chemical perchloroethylene (perc). The rule includes a phase-out of perc use at dry cleaners located in residential buildings, along with requirements that will reduce perc emissions at other dry cleaners.

- EPA based these amendments to its 1993 air toxics standards for perc cleaners on a recent review of advancements in emissions reduction technology for drycleaners. The Agency also considered information on health effects of perc.

- Perchloroethylene, also known as perc, tetrachloroethyene and tetracholorethylene, is a solvent used in dry cleaning. Approximately 28,000 U.S. dry cleaners use perc, which is the only air toxic emitted from the dry cleaning process. Air toxics, also called hazardous air pollutants, are known or suspected to cause cancer or other serious health or environmental effects.

- EPA's 1993 standards prevent approximately 15,000 tons of perc from being emitted into the air annually. These emissions reductions resulted from increased use of alternative dry cleaning solvents, the replacement of older dry cleaning machines, and state and industry programs to improve machine efficiencies and reduce perc use. Today's amendments will prevent another 400 tons of perc from being emitted each year.

- The final rule is posted at http://www.epa.gov/air/drycleaningrule/regulatory.html.

RULE REQUIREMENTS

- The final rule affects three types of dry cleaners that use perc: large industrial and commercial dry cleaners; smaller "typical" dry cleaners (often found in shopping centers); and smaller dry cleaners located in residential buildings.

Large Industrial & Commercial Dry Cleaners

- Large industrial and commercial dry cleaners are classified as "major sources," meaning they emit more than 10 tons of perc a year. The Clean Air Act requires that EPA assess, and if necessary reduce, the potential for health risks from exposure to perc emissions from major source perc dry cleaners.

- There are 12 of these large dry cleaners in the United States. These dry cleaners are covered by EPA's 1993 air toxics standards, which are known as maximum achievable control technology (MACT) standards.

- The final rule requires new and existing large industrial and commercial perc dry cleaners to use state-of-the-art equipment to detect perc leaks from the machines, repair the leaks and maintain records.

Small 'Typical' Dry Cleaners

- Typical dry cleaners are the type of dry cleaner you might see in a shopping center or as a stand-alone building. These dry cleaners are classified as "area sources," which means they emit less than 10 tons of perc each year. These smaller dry cleaners are regulated by emissions standards known as generally available control technology (GACT) standards, issued in 1993. There are about 27,000 typical dry cleaners in the United States.

- The final rule requires *existing* typical area source dry cleaners to:

    - Eliminate all machines requiring the movement of wet clothes from one machine to another for drying (called transfer machines). Transfer machines are considered the highest-emitting type of dry cleaning equipment. Approximately 200 of these machines currently are in use.

    - Use specialized equipment monthly to detect perc leaks, repair such leaks and maintain records.

- *New* typical area source dry cleaners:

    - Are not permitted to install transfer machines.
    - Must add carbon adsorbers (devices that reduce perc vapors exiting the dry cleaning machine as the machine door is opened) to the closed-loop machines with refrigerated condensers that are required under the 1993 rule.
    - Must use the same type of specialized equipment as existing typical dry cleaners to monthly detect perc leaks, repair such leaks and maintain records.

Small Dry Cleaners in Apartment Buildings

- About 1,300 small "area source" dry cleaners using perc are located on the ground floor of residential buildings. Like typical small dry cleaners, these co-residential cleaners are covered by emissions standards known as generally available control technology (GACT) standards, issued in 1993.

- Because residences in these co-residential buildings are located very close to these dry cleaners, residents' exposures and their estimated cancer risks can be much higher than for typical area sources.

- The final rules will eliminate risks associated with perc emissions from co-residential dry cleaners.

- The requirements for *existing* co-residential dry cleaners are:

    - To eliminate transfer machines and meet the same monitoring, leak detection and repair, and recordkeeping requirements as typical small dry cleaners.
    - To phase-out perc machines as those units wear out. This requirement will eliminate the use of perc by dry cleaners in residential buildings. All existing perc machines must be removed from residential buildings by December 21, 2020. These dry cleaners may replace worn-out perc machines with newer available non-perc technology.

- In addition, *new* drycleaning machines in residential buildings are not allowed to use perc. They must use an alternative cleaning method or locate in a non-residential building.

    - Any new per drycleaning machine in residential buildings that began operating between December 21, 2005 and July 13, 2006 must install equipment to aggressively control perc emissions (i.e., refrigerated condensers, carbon adsorbers, and vapor barriers). These facilities also must conduct weekly inspections to detect perc leaks, repair such leaks and maintain records. These sources must eliminate perc use within 3 years after publication of this final rule in the *Federal Register*.

BACKGROUND

- The Clean Air Act requires EPA to regulate air toxics from large industrial facilities in two phases.

- In the first, technology-based phase, EPA develops standards for controlling the emissions of air toxics from sources in an industry group, also called a Asource category." The standards for large sources are known as maximum achievable control technology (MACT) standards, and are based on the emissions levels of the better-controlled and lower-emitting facilities in an industry. The standards for many small sources are called Generally Available Control Technology (GACT) and are designed to address the smaller facilities. EPA finalized the perc dry cleaning MACT and GACT standards in September of 1993.

- In the second phase, the law requires EPA to review the technology-based standards and revise them, if necessary, to account for improvements in air pollution controls and/or prevention. The law directs EPA to repeat this assessment every eight years.

- During the second phase of the program, EPA also is required to assess the remaining health risks from each industry group for which it has set MACT standards and determine whether more health-protective standards are necessary. If more protective standards are needed, EPA amends the MACT standards to add

what is known as “residual risk standards.” EPA has discretion whether to conduct a residual risk assessment for facilities that have GACT standards.

- EPA’s Science Advisory Board has identified perc as a possible to probable human carcinogen. Exposure to perc has been linked to the development of liver tumors in mice. Epidemiological studies have shown mixed results, with some studies reporting increased incidence of a variety of tumors and other studies not reporting carcinogenic effects.

- Exposure to perc also is associated with chronic, non-cancer health effects, including liver and kidney damage in rodents, and neurological effects in humans. Short-term exposures (from hours to a day or two) can result in loss of coordination; eye, nose and throat irritation; and headache.

FOR MORE INFORMATION

To read today’s final rule, visit http://www.epa.gov/air/drycleaningrule/regulatory.html. The final rule and other background information are also available at on line at www.regulations.gov