

US EPA ARCHIVE DOCUMENT



### Could your family be affected?

In the United States, about 70% of all dry cleaners use perchloroethylene, a known toxic air pollutant, as the cleaning solvent.

— International Fabricare Institute

The Cleaner Technologies Substitute Assessment for Professional Fabricare Processes is a technical report that presents relative risk, cost, and performance information on existing and new cleaning technologies.

— U.S. EPA  
Design for the Environment



# Reducing Air Pollution from: Dry Cleaning Operations

### Why do dry cleaning operations need to reduce air pollution?

People who are exposed to toxic air pollutants at sufficient concentrations, for sufficient durations, may increase their chances of getting cancer or experiencing other serious health effects, such as reproductive problems, birth defects, and aggravated asthma.

Pollution prevention can reduce the impact of air pollution by using materials, processes, or practices that reduce or eliminate air pollution at the source.

Dry cleaning operations offer garment cleaning services to consumers and commercial businesses. Their activities include cleaning, drying, stain removal, and finishing, all of which may release pollutants into the air and may contribute to health concerns in the shop and in the community.

The best dry cleaners implement pollution prevention strategies not only to comply with federal, state, local, and Tribal laws but also to further minimize impacts on human health and the environment. Check with your state, local, and Tribal agencies for existing regulations.

### What kinds of air pollutants may come from dry cleaning operations?

- The main source of air toxics from dry cleaners is the solvent used in the cleaning process. The most commonly used solvents are perchloroethylene and petroleum solvents.
- Perchloroethylene is a known toxic air pollutant. While federal, state, local, and Tribal regulations limit the amount of emissions from dry cleaners, dangerous releases of toxic air pollutants can occur if a dry cleaner does not operate in compliance with regulations.
- Petroleum solvents used in dry cleaning operations can release some

toxic air pollutants and volatile organic compounds (VOC). Chemicals in these substances can react in the air to form ground-level ozone (smog), which has been linked to a number of respiratory effects.

### How can dry cleaners reduce air pollution?

Making changes in dry cleaning work practices can stop pollutants at the source and increase production efficiency. By evaluating and improving work practices, dry cleaners can decrease emissions, reduce production costs, and protect employee and public health.

Examples of changes in work practices that help reduce air pollution include:

#### Lowering Emissions at the Source

- Minimize emissions through good work practices such as covering containers, preventing spills, and using closed solvent containers and delivery units.
- Maintain equipment to avoid excess leaks and evaporation.
- Use equipment properly.

#### Changing Technologies

- Change to technologies such as wet cleaning, liquid carbon dioxide, and silicone-based cleaning machines.
- Wet cleaning processes use water and natural soaps to clean clothes that typically require dry cleaning. Be aware that wet cleaning can result in increased labor time and can result in shrinkage for some fabrics.
- Liquid CO<sub>2</sub> cleaning technology eliminates cleaning with solvents.
- Silicone-based cleaning machines do not contain any toxic air pollutants or VOC and are odorless and affordable.

# COMMUNITY INFORMATION SHEET

## Dry Cleaning Operations

### As a community, what can you do to help reduce air pollution from dry cleaning operations?

#### Make Connections

- Get to know local dry cleaners because they know best about the materials and processes used in their businesses and the regulations with which they must comply.
- Keep local media aware of progress by sending them updates. Publicity can reward success and attract more public involvement.

#### Make a Plan

- One idea is to form a work group that includes local dry cleaners to develop and implement workable pollution reduction plans.

#### Locate Resources

- Use the “For Further Information” list below to find

governmental and nonprofit contacts who can provide help with analysis, technical information, equipment, and funding.

#### Sponsor Training and Translation

- Small shops may need funding in order to attend or provide training.
- Improved skills lead to less exposure for workers.
- Sponsor translation of pollution prevention materials to languages commonly spoken by owners and operators.

#### Reward Shops

- Use media connections to provide coverage for successful efforts. Positive publicity can mean increased business.
- Visibly displayed awards or certificates may also increase business.

## For Further Information

- International Fabricare Institute: [www.ifi.org](http://www.ifi.org), (800) 638-2627
- International Dry Cleaners Congress: [www.idcnews.org](http://www.idcnews.org)
- Neighborhood Cleaners Association: [www.nca-i.com](http://www.nca-i.com)
- Community-Based Projects: [www.epa.gov/air/toxicair/community.html](http://www.epa.gov/air/toxicair/community.html)
- National Emission Standards for Hazardous Air Pollutants: Dry Cleaners: [www.epa.gov/ttn/atw/dryperc/dryclpg.html](http://www.epa.gov/ttn/atw/dryperc/dryclpg.html)
- Community information, regional, state contacts: [www.epa.gov/epahome/whereyoulive.htm](http://www.epa.gov/epahome/whereyoulive.htm)
- Information specific to dry cleaners: U.S. EPA Design for the Environment: [www.epa.gov/dfe/projects/garment/index.htm](http://www.epa.gov/dfe/projects/garment/index.htm)
- Pollution prevention awards: State, local, and Tribal government agencies, universities
- Toxicity of solvents: Integrated Risk Information System (IRIS) ([www.epa.gov/iris](http://www.epa.gov/iris)), Air Toxics Health Effects Notebooks ([www.epa.gov/ttn/atw/hapindex.html](http://www.epa.gov/ttn/atw/hapindex.html))
- Indiana 5-Star Environmental Recognition Program for Dry Cleaners: [www.in.gov/idem/ctap/cleaners/5stindex.html](http://www.in.gov/idem/ctap/cleaners/5stindex.html)
- For more information, please see the Resources section of the Owner/Operator Information Sheet.

*The Indiana 5-Star Environmental Recognition Program for Dry Cleaners is a voluntary program that ranks participating dry cleaners on a scale of 1 to 5 stars. The program recognizes those dry cleaners willing to do more for the environment and worker safety than the rules require. The Indiana Department of Environmental Management announces awards on a quarterly basis. Many shops have found this to be a very beneficial advertising and marketing tool.*

— Indiana Office of Pollution Prevention and Environmental Assistance

