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Design for the Environment
Garment and Textile Care Program Fact Sheet

Cleaner Clothes, Cleaner Neighborhoods, And Cleaner Solutions

What is *Design for the Environment*?

EPA's Design for the Environment (DFE) Program is a voluntary initiative that forges partnerships with various stakeholder groups in an effort to:

- Incorporate environmental concerns into the traditional decision-making parameters of the business world: '*cost*' and '*performance*.'
- Build incentives for behavior change to encourage continuous environmental improvement.
- Encourage green chemistry and green engineering approaches that reduce or eliminate environmental concerns.

To accomplish these goals, the program utilizes EPA expertise and leadership to compare the relative environmental and human health risks, performance, and cost tradeoffs of traditional and environmentally-preferable technologies. DFE disseminates information on its work to all interested parties and also assists businesses to implement the new technologies identified through the program.

The program currently has cooperative partnerships with:

- Industry
- Trade associations
- Academia
- Environmental & public interest groups
- Labor unions
- Research organizations
- Government purchasing agencies
- Professional institutions
- State and local governments

Other federal agencies

Why is EPA working with garment care professionals?

Since 1992, EPA has worked in partnership with the drycleaning industry as part of EPA's Design for the Environment Program. With approximately 34,000 commercial shops in neighborhoods and malls across the country, drycleaners are one of the largest group of Chemical users that come into direct contact with the public. Because of the potential health and environmental concerns associated with perchloroethylene, or "perc," a chemical solvent used by most drycleaners, EPA and stakeholders from the drycleaning industry and public interest groups have been working together to evaluate other cleaning process controls and technologies.

How did the DfE Garment and Textile Care Program get started?

The DFE Garment and Textile Care Program (GTCP) was initiated after a 1992 international roundtable on drycleaning in which industry leaders and EPA agreed that health and environmental issues surrounding the drycleaning industry could be addressed most effectively through the Design for the Environment's voluntary, proactive approach. Hence, the project partnership was Established to encourage the development and incorporation of environmentally-preferable cleaning methods which professional cleaners can offer to their customers, while maintaining the same long-term standard of garment cleaning, and while Maintaining or increasing economic viability. Initial efforts focused on the development and evaluation of new cleaning methods, the development of training materials, and the dissemination of information. It was soon recognized that decisions made in related upstream industries affect the cleanability of garments, and ultimately the cleaning technology choices made by drycleaners. EPA organized several conferences and workgroups which expanded the partnership to include representatives from industries such as garment and textile designers, manufacturers, fiber producers, retailers, and consumers. The primary goal of the expanded partnership was to explore how decisions made by upstream industries, such as textile manufacturers, affect the incorporation of environmentally-preferable methods into professional cleaning operations. These issues resulted in the GTCP incorporating a life cycle approach, including the identification of decisions and trends that impact garment care process choices.

What is EPA doing about garment care

The GTCP continues to work with partners to encourage the development of cost effective and environmentally-preferable technologies, and to promote their implementation through education and technical assistance to industry and the general public. A number of informative publications are available in hard copy and on the GTCP web site. Working with the industry, EPA published the ***Cleaner Technologies Substitutes Assessment for Professional Fabricare Processes*** (CTSA) in September 1998, which is a technical report that presents relative risk, cost, and performance information on existing and new cleaning technologies and substitute solvents. The goal of the CTSA was to create a comparative assessment of clothes cleaning technologies in order to provide dry-

cleaners with information they can use to make informed technology choices that incorporate environmental concerns along with the usual parameters of cost and performance. The CTSA was intended to assist cleaners who might have limited time or resources to collect the information themselves. The technology information in the CTSA has been updated through subsequent case studies and fact sheets.

The GTCP has made available a number of documents addressing environmentally-preferable cleaning technologies. These publications are primarily for non-technical audiences, and include a fact sheet titled ***Major Federal Regulations for Petroleum Solvent Drycleaners***, case studies on wetcleaning, liquid carbon dioxide, an aqueous process for leather and suede Garments, a summary version of the **CTSA**, a ***CTSA Fact Sheet***, and ***Frequently Asked Questions About Drycleaning.***

The EPA is collaborating with the Department of Defense (DOD) to evaluate the performance of environmentally-preferable cleaning processes for the cleaning of standard military uniforms. The study is being conducted as part of DSCP's broader Pollution Prevention and Waste Minimization Programs aimed at reducing the use of chemicals that are potentially harmful to human health and the environment. DSCP's overall goal is to reduce military personnel exposures to hazardous chemicals at military installations, as well as to reduce costs associated with storage, transport, and disposal of traditional drycleaning solvents.

EPA continues to support the evaluation of textile parameters such as colorfastness of common commercial textile dyes, as well as continuing to support the development of national and international test procedures that can be used to support care label instructions for cleaner technologies. This work continues under a grant with the North Carolina State University College of Textiles and TextileCare International Ltd.

What environmental benefits have resulted from the GTCP partnership?

The EPA DFE GTCP has been widely credited by industry and environmental groups with having a significant impact on the drycleaning industry. Since the 1992 inception of the GTCP, There has been an impressive decline in perc use by drycleaners of over 68%. While the majority of the nation's drycleaners still use perc as their primary cleaning solvent, there are now several environmentally-preferable cleaning technologies available to cleaners and their customers. One of the first new cleaning technologies, *professional wetcleaning*, became commercially established in 1994 and uses water as the solvent. In 1998, a new process using liquid carbon dioxide as the solvent became commercially available. Others including a liquid silicone solvent are becoming established. An increasing number of cleaners are offering these new cleaning technologies to their customers.

Another indicator of the success of this program is the steadily increasing sales of specialized new technology equipment and related products, with over 2,300 units sold as of the end of 2000. This program's industrial ecology approach has resulted in an increased appreciation by stakeholders from the apparel and textile industries regarding the need to examine how their "upstream" decisions impact professional cleaning and cleaners' ultimate choices of cleaning technologies. This approach has greatly increased the potential environmental impact of this program well into the future.

How does the GTCP affect garment care professionals?

By joining EPA in its commitment to safer, cleaner technologies, drycleaners can maintain a competitive edge in the marketplace. With an enhanced awareness of available technology options and by offering environmentally-preferable process choices to their customers, drycleaners can improve their operations and bottom line while contributing to a cleaner environment and safer workplace. As consumers increasingly opt for "green" environmentally-sound products and services, drycleaners that consider the health and environmental impacts of their business decisions are more likely to sustain solid support from both their customers and neighbors. Educating the public about new cleaning technologies is a job professional cleaners can embrace for sound business reasons.

As they face an ever-widening array of products and services, it is more critical than ever that consumers understand how their every day choices affect their health and the environment. This better understanding will allow the public to make responsible decisions that benefit them, their families, and their community. ***Consumers can ask their neighborhood cleaners to offer environmentally-preferable cleaning services that will contribute to a cleaner environment.***

How Can I Get More Information?

For information about ***EPA's DFE Garment and Textile Care Program***, visit their web site where publications can be read and downloaded: ***http://www.epa.gov/dfe/garment/garment.html***

Recent publications include:

Military Uniform Cleaning Study Fact Sheet (EPA 744-F-01-003)
100% Wetcleaning Facility: Route-Only Service Case Study (EPA 744-F-01-004)
Liquid Carbon Dioxide and Surfactant System Case Study (EPA 744-F-98-018)
Wetcleaning Systems for Garment Care Case Study (EPA 744-F-98-016)
Water-Based Cleaning System for Suede and Leather (EPA 744-F-98-017)
Major Federal Regulations Affecting Petroleum Drycleaners Fact Sheet (EPA 744-F-99-005)
Frequently Asked Questions about Drycleaning (EPA 744-K-98-002)
Garment and Textile Care Resource Guide (EPA 744-K-98-005)
Cleaner Technologies Substitutes Assessment for Professional Fabricare Processes (CTSA) (EPA 744-B-98-001)
CTSA: Summary (EPA 744-S-98-001)
CTSA Fact Sheet (EPA 744-F-98-011)
A web list of cleaners offering wetcleaning, liquid CO2 & liquid silicone processes

Single copies of DFE documents can be ordered from:

EPA's Pollution Prevention Information Clearinghouse
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW (7409)
Washington, DC 20460
Telephone: (202) 260-1023
Fax: (202) 260-0178
Email: ppic@epa.gov