



City of Chicago  
Richard M. Daley, Mayor

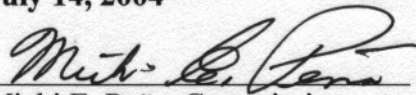
Department of General Services

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Title: **Green Cleaning  
Low Environmental Impact Cleaning Policy**

Date Adopted: **July 14, 2004**

Approved by:   
Michi E. Peña, Commissioner  
City of Chicago, Department of General Services

## INTRODUCTION:

The purpose of this policy is to require the Cleaning and Maintenance Contractor for this project to use environmentally benign cleaning products and promote housekeeping practices which will limit hazards to the building occupants, as well as maintenance and janitorial staff. Cleaning as used herein includes procurement of cleaning materials and agents, floor maintenance, trash removal, bathrooms, offices and detention areas. Cleaning products can have very negative impacts on human health and the environment. They frequently contain chemicals associated with cancer, reproductive disorders, respiratory ailments, eye or skin irritation, and other health conditions. They can also include toxic chemicals that adversely affect drinking water quality, lakes and streams, and plant and animal life. Additionally, many cleaning products in concentrated form are considered hazardous waste, which require special handling, storage, and disposal.

This policy requires the Cleaning and Maintenance Contractor to develop and document a plan for low-impact environmental cleaning. This plan should include the following actions where applicable:

1. Provide sustainable cleaning systems and strategies. Provide documentation/specifications on the green cleaning strategies, as well as chemical and cleaning equipment used to accomplish those strategies. The frequency of cleaning of different areas of the project site should also be included.
2. Use sustainable cleaning products. Provide documentation/specifications on the chemical and cleaner products used.
3. Use chemical concentrates and appropriate dilution systems. Provide documentation/specifications on the cleaner dispensing and dilution equipment used.
4. Provide proper training of maintenance personnel in the hazards, use, maintenance and disposal of cleaning chemicals, dispensing equipment, and packaging. Provide a training plan with specific directions and examples of low-impact environmental cleaning practices. These shall include step-by-





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step instructions for the proper dilution, use, disposal, and the use of equipment. Manufacturers shall have product labeling systems to assist non-English-speaking or illiterate personnel.

5. Use hand soaps that do not contain antimicrobial agents (other than as a preservative system), except where required by health codes and other regulations (i.e. food service and health care requirements).

6. Use cleaning equipment that reduces impacts on IAQ. Provide documentation/specifications on the equipment used.

The Cleaning and Maintenance Contractor must submit, in writing, a copy of the low-impact environmental cleaning plan to the Department of General Services, Architecture, Engineering and Construction Management Division prior to commencement of the Contract.

## DEFINITIONS

The following definitions are based, in large part, on Green Seal's Industrial and Institutional Cleaners (GS-37) standard

*Bathroom cleaners.* This category includes products used to clean hard surfaces in a bathroom such as counters, walls, floors, fixtures, basins, tubs, and tile. It includes products that are required to be registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), such as disinfectants and sanitizers, but does not include products specifically intended to clean toilet bowls.

*Concentrate.* This is a product that must be diluted by at least eight parts by volume water (1:8 dilution ratio) prior to its intended use.

*Dispensing-system concentrates.* These are products that are designed to be used in dispensing systems that cannot be practically accessed by users.

*General-purpose cleaners.* This category includes products used for routine cleaning of hard surfaces including impervious flooring such as concrete or tile. It does not include cleaners intended primarily for the removal of rust, mineral deposits, or odors. It does not include products intended primarily to strip, polish, or wax floors, and it does not include cleaners intended primarily for cleaning toilet bowls, dishes, laundry, glass, carpets, upholstery, wood, or polished surfaces. This category does not include any products required to be registered under FIFRA, such as those making claims as sterilizers, disinfectants, or sanitizers.

*Glass cleaners.* This category includes products used to clean windows, glass, and polished surfaces. This category does not include any products







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required to be registered under FIFRA, such as those making claims as sterilizers, disinfectants, or sanitizers.

***Ingredient.*** Any constituent of a product that is intentionally added or known to be a contaminant that comprises at least 0.01% by weight of the product.

***Ozone depleting compounds.*** An ozone-depleting compound is any compound with an ozone-depletion potential greater than 0.01 (CFC 11 = 1).

***Product as used.*** This is the most concentrated form of the product that the manufacturer recommends for a product's intended use. For example, if a manufacturer recommends a product be diluted 1:64 or 2:64 for use as a general-purpose cleaner, the product shall meet the environmental and performance requirements at a dilution of 2:64.

***Primary packaging.*** This packaging is the material physically containing and coming into contact with the product, not including the cap or lid of a bottle.

***Recyclable package.*** This package can be diverted from the waste stream through available processes and programs, and can be collected, processed, and returned to use in the form of raw materials or products.

***Undiluted product.*** This is the most concentrated form of the product produced by the manufacturer for transport outside its facility.

## **POLICIES:**

### **LOW-IMPACT ENVIRONMENTAL CLEANING FLUID AND HOUSEKEEPING POLICY**

This policy limits the utilization of concentrated cleaning products dispensed from *closed dispensing systems*. The products to be submitted to meet this policy must comply with the minimum standards established for the performance of these products are based on the Green Seal Standard for Industrial and Institutional Cleaners (GS-37), <http://www.greenseal.org/standards/industrialcleaners.htm> wherever possible. Green Seal is an independent, non-profit organization that strives to achieve a healthier and cleaner environment by identifying and promoting products and services that cause less toxic pollution and waste, conserve resources and habitats, and minimize global warming and ozone depletion. Green Seal has no financial interest in the products that it certifies or recommends or in any manufacturer or company. Green Seal's





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evaluations are based on state-of-the-art science and information using internationally recognized methods and procedures.

The consensus criteria described in GS-37 includes 12 mandatory environmental requirements and 3 additional mandatory requirements. The mandatory criteria include specifications for:

- \* Toxicity
- \* Carcinogens and reproductive toxins
- \* Skin and eye irritation
- \* Skin sensitization
- \* Combustibility
- \* Smog, ozone, and indoor air quality
- \* Aquatic toxicity
- \* Eutrophication
- \* Aquatic biodegradability
- \* Concentrates
- \* Fragrances
- \* Prohibited chemicals

#### **Additional requirements**

- \* Training
- \* Packaging
- \* Labeling

### **CLEANING AGENTS**

This policy requires that low-impact cleaning products meet the five following mandatory criteria:

1. They contain no ingredients from the Prohibited Industrial Toxic Chemicals, based on the U.S. EPA's list. A product is considered toxic if any of the following criteria apply:
2. Oral lethal dose 50 (LD50) < 2,000 mg/kg.
3. Inhalation lethal concentration (LC50) < 20 mg/L
4. If the vapor-phase concentration of the product at room temperature is less than 20 mg/L, it should be tested at its saturation concentration. If it is not toxic at this concentration, it passes the inhalation criterion.
5. They contain no carcinogens which appear on lists established by the International Agency for Research on Cancer, the National Toxicology Program, and the Occupational Safety and Health Administration, or chemicals which are defined as Class A, B, or C carcinogens by the Environmental Protection Agency.







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6. They contain no ozone-depleting ingredients. An ozone-depleting compound is any compound with an ozone-depletion potential greater than 0.01 (CFC 11 = 1).

7. Compliance with the following phosphate content levels; The product *as used* must not contain more than 0.5% by weight of total phosphorus.

8. Compliance with the following Volatile Organic Compound (VOC) content levels:

The VOC of the product as used shall not exceed the following:  
1% by weight for general-purpose and bathroom cleaners  
3% by weight for glass cleaners

The VOC shall be determined by California Air Resources Board Method 310.

In addition to these five mandatory criteria, GS-37 requires additional factors of concern including the following:

- \* Hazardous Waste: Products are favored which did not require disposal as a hazardous waste.
- \* Skin and Eye Irritation: Products are favored that are less irritating.
- \* PH: Products are favored that have a pH closer to neutral.
- \* Flash Point: Products are favored that do not ignite easily.
- \* Volatile Organic Compound (VOC) content: Products with the lowest VOC content are favored.
- \* Biodegradability: Biodegradable products are favored.
- \* Alkylphenol Ethoxylates: Because research indicates that APEs are used in detergents that do not degrade completely in the environment, and that their biodegradation products may be endocrine disruptors, products are favored that do not contain APEs.
- \* Dyes and Fragrances: Products that are offered without fragrances or dyes are favored.
- \* Packaging: Products are favored if they are available with recycled packaging, packaging that is easily recycled, available as a concentrate, and is available using a system of container collection and refilling (reuse).

The additional factors must be complied with to the greatest extent possible. Individual products which exceed the requirement of the additional factors should be noted in the submittal of the low-impact environmental cleaning plan submitted to the Department of General Services, Architecture, Engineering and Construction Management Division

## PROHIBITED INDUSTRIAL TOXIC CHEMICALS





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The following comprise the list of prohibited Industrial toxic chemicals that can not be used in any cleaning agent or chemical at the 2<sup>nd</sup> Floor of Area One Headquarters. This list is primarily based on the U.S. EPA's Industrial Toxic Chemicals Avoided by the Use of Environmentally Preferable Cleaners:

- \* 1,1,1-Trichloroethane
- \* Alkylphenol ethoxylates
- \* Benzene
- \* Cadmium
- \* Carbon Tetrachloride
- \* Chloroform
- \* Chromium
- \* Cyanide
- \* Dibutyl phthalate
- \* Dichloromethane
- \* Lead
- \* Mercury
- \* Methyl Ethyl Ketone
- \* Methyl Isobutyl Ketone
- \* Nickel
- \* Tetrachloroethylene
- \* Toluene
- \* Trichloroethylene
- \* Xylenes

Heavy metals including arsenic, lead, cadmium, cobalt, chromium, mercury, nickel or selenium

Ozone depleting compounds or propellants

### **LOW ENVIRONMENTAL IMPACT HOUSE KEEPING DISPOSABLE PRODUCTS POLICY**

Use disposable janitorial paper products and trash bags that meet the minimum requirements of USEPA's Comprehensive Procurement Guidelines for the appropriate category. Also, use plastic trashcans and other liners with a minimum of 30% post-consumer recycled content. Furthermore, it is preferable that the paper products be manufactured without the additional use of elemental chlorine or chlorine compounds (Processed Chlorine-Free).

### **LOW ENVIRONMENTAL IMPACT CLEANING EQUIPMENT POLICY**







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Over the performance period, follow a policy for the use of janitorial equipment that maximizes reduction of building contaminants and minimizes environmental impact.

Develop, implement and maintain a policy for the use of janitorial equipment that maximizes effective reduction of building contaminants with minimum environmental impact. Evaluate the janitorial equipment currently being used and make a plan for upgrading to janitorial equipment that maximizes effective reduction of building contaminants with minimum environmental impact.

**Amends/Rescinds: none**

**Cross References: USGBC LEED for Existing Buildings Rating System;  
Green Seal's Industrial and Institutional Cleaners (GS-37) standard**

**Legal References: none**

