

United States Green Building Council

RE: Green Cleaning Plan  
Blacksburg Motor Company Building  
400 South Main Street

Dear USGBC;

This is to certify that the attached Green Cleaning Plan is to be used in the Blacksburg Motor Company Building.

This building, which houses Town meeting facilities and the Planning and Building, and Engineering and GIS Departments of the Town Government is the first Town facility construction for which LEED certification is being pursued. We will use the building as a facility to demonstrate and educate the general public and the building and development community on green building construction and operation practices.

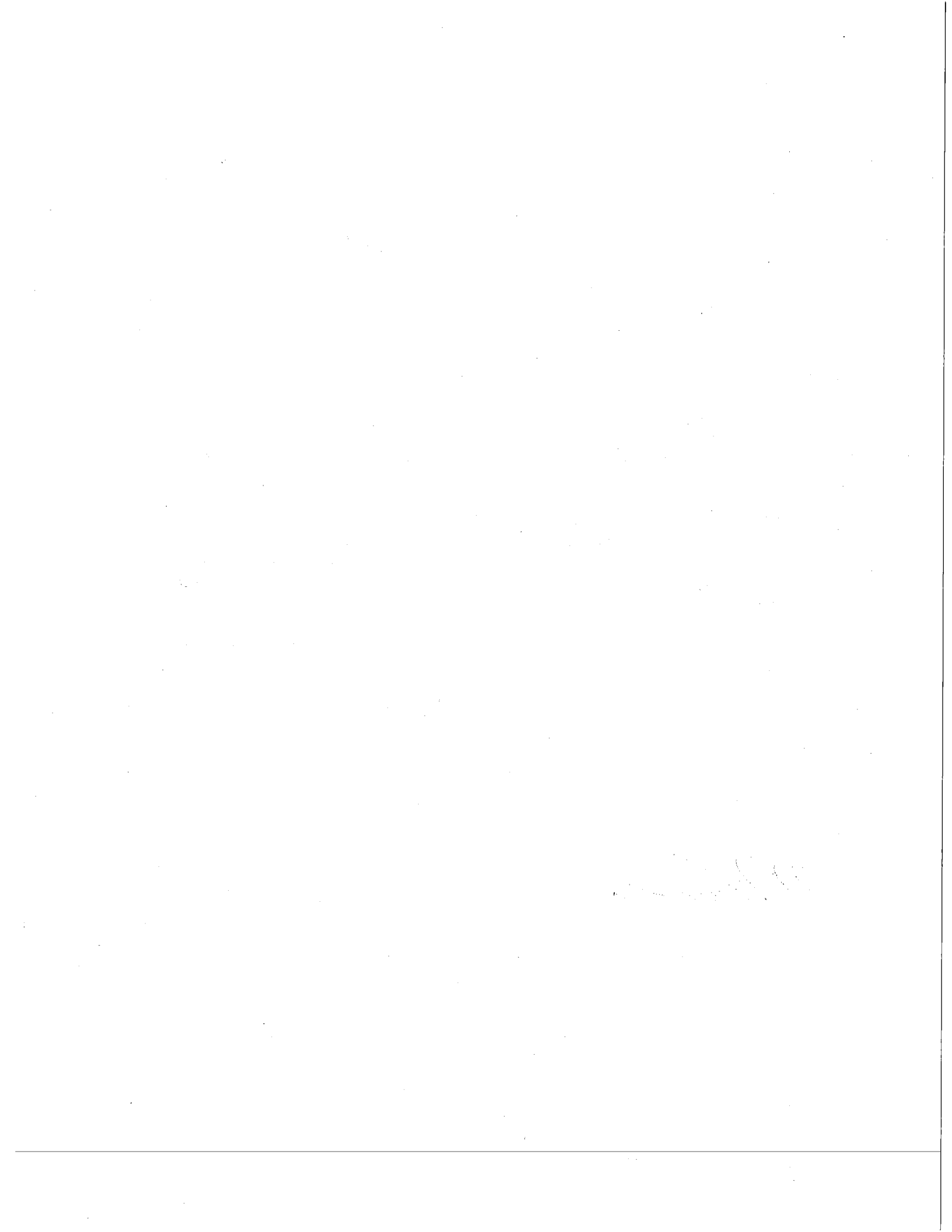
In addition, we will be demonstrating green and sustainable building operation and maintenance practices at this facility that will be spread to other town facilities.

We anticipate pursuing LEED EB in this facility upon completion of the LEED NC certification process. As such, the Green Cleaning Plan which is attached will continue to guide and direct the cleaning products and practices in the Blacksburg Motor Company Building.

Sincerely yours,



Marc Verniel  
Town Manager  
Town of Blacksburg, Virginia



# Green Cleaning Plan

For

**Blacksburg Motor Company Building  
400 South Main St.  
Blacksburg, VA 24062**

**Date: August, 2009**

**Approved By:  
Brenda Linkous,  
Public Works Department**

**Adele Schirmer, Director  
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## Summary

The purpose of this plan is to provide facility maintenance staff with guidelines for proper cleaning procedures that are less polluting to our environment and not toxic to the staff and building occupants. This plan will also serve as a LEED submittal to the United States Green Building Counsel (USGBC) in order to demonstrate that the project has met the intent of the Green Cleaning /Housekeeping Innovation Credit.

According to USGBC, the intent of the Green Cleaning/Housekeeping Innovation Credit is to: "Reduce exposure of building occupants and maintenance personnel to potentially hazardous chemical contaminants that adversely impact air quality, occupant well being, and the environment." In order to meet the above intent this plan will provide clear performance goals for facility cleaning and housekeeping that will provide direction for a comprehensive building maintenance program. Per the request of the USGBC, this plan will provide the following (at a minimum):

1. A statement of purpose describing what the policy is trying to achieve from a health and environmental standpoint, focusing on cleaning chemicals and custodial training at a minimum.
2. A contractual or procedural requirement for operations staff to comply with the guidelines, including a written program for training and implementation.
3. A clear set of acceptable performance level standards by which to measure progress or achievement, such as Green Seal Standard GS-37 or California Code of Regulations, Title 17 Section 94509 "VOC Standards for Cleaning Products".
4. Documentation of the programs housekeeping policies and environmental cleaning solution specifications, including a list of approved and prohibited chemicals and practices. Demonstrate the the products used in the project are non-hazardous, have a low environmental impact, and meet the criteria set forth in #3 above. Concentrated cleaning products should be utilized when available.
5. Select six major cleaning needs and identify products (compliant with #3 above) that will be supplied to meet these needs. Note that one cleaner may address several cleaning functions. Examples of cleaning needs include, but are not limited to : counter, sink, tub/shower, tile, limescale remover, toilet, hard flooring, laundry detergent, laundry bleach and windows.

## Statement of Purpose

The purpose of the requirements in this plan is to create an expectation and requirement that the Town (Owner) will purchase cleaning products and utilize cleaning methods that will reduce or eliminate adverse effects on building occupant health and the surrounding environment. Cleaning products that are covered by this contract include , but are not limited to : general purpose cleaners, bathroom cleaners, glass cleaners, carpet cleaners, disinfectants, floor care products, hand soaps, and paper supplies (for cleaning and hand drying).

Recommendations of cleaning products are provided in this plan and are meant to provide

current examples of cleaning products that are acceptable for use in the facility. However substitute products may be used if they are Green Seal Certified and meet the other required criteria provided in this plan. Cleaning methods shall focus on effectively removing indoor pollutants while also maintaining a safe indoor environment.

By following the guidelines in this plan, building occupants and the environment should benefit in several ways. Appropriate cleaning products and methods will improve indoor air quality for all building users. This should contribute to happier and healthier building occupants that are more productive and less impacted by building related illnesses. Cleaning products will contain less environmental contaminants and reduce the building's ecological "footprint" by minimizing the impact of cleaning products that will be inevitably washed down the drain.

The following plan sections will provide detailed information on cleaning procedures: "Cleaning Product Storage", "Proper Cleaning Methods", "Recommended Cleaning Frequency", and "Product Disposal Procedures". All cleaning products purchased for use in this building must meet the referenced standards cited in "Required Product Standards" and may not include any chemicals in the "Prohibited Ingredients List". Prior to beginning any cleaning or maintenance in the building, staff must be trained in accordance with the requirements in the "Staff Training" section.

Further, implementing Green Cleaning in this building, the Blacksburg Motor Company building will serve as a demonstration and catalyst for expanding green cleaning into all Town facilities. This will be achieved through standardization of purchasing of cleaning materials as the green cleaning products are proven to be effective to the local community, and as the green cleaning practices are proven to the direct building occupants and users to be beneficial and sufficient.

### **Cleaning Product Storage Requirements**

1. Cleaning products shall only be stored in the Janitors room, in the lower level of the building, which is a fully ventilated room with walls that extend to the ceiling and doors with an automatic closer.
2. Cleaning product containers must be securely closed when not in use. If a container will not seal completely, move the contents to a new container.
3. The Janitors room shall be kept clean and free of any standing water.
4. Cleaning products shall be neatly arranged on the open shelves in the Janitors room such that they are easily found, and fully used prior to opening a new container.

### **Proper Cleaning Methods (General)**

1. Reduce the unnecessary use of chemicals.
  - a. Use "microfiber" mops and cloths that do not require chemical application for general dusting purposes.

- b. Use durable floor finishes. Thoroughly scrub finish with floor cleaner and recoat floor finish as necessary. Prohibit the use of noxious floor strippers.
  - c. Ensure that cleaning schedule meets the actual needs of the building to prevent redundant cleaning. The owner and cleaning staff shall assess the cleaning schedule and adjust as necessary.
2. Properly dilute cleaning products.
- a. Dilute any concentrated cleaning product according to the manufacturer's instructions.
  - b. Utilize the lowest concentration recommended by the manufacturer for each application.
3. Reduce dust and dirt.
- a. Prevent outdoor contaminants from entering the building.
    - i. Use rollup entry mats
    - ii. Contract a cleaning service to regularly clean and replace the mat.
    - iii. Replace entrance mats when there is any visible surface wear.
  - b. Damp-mop or vacuum hard surfaces rather than sweeping to reduce airborne dust.
  - c. Vacuum cleaners must use HEPA filters and vacuum bags that , at a minimum retain all particles larger than 3 microns.
  - d. Replace vacuum bags when  $\frac{3}{4}$  full. Be sure to check vacuum bags prior to each use.
  - e. Dust hard surfaces using "microfiber" products.
4. Prevent microbial growth.
- a. Only use disinfectants when necessary. Follow this procedure for proper disinfection:
    - i. First, clean area to be disinfected with an appropriate cleaner.
    - ii. Apply disinfectant and allow to set for 10 minutes prior to rinsing.
  - b. Replace mop heads and sponges on a regular basis, at a minimum, when they show visible dirt or create any kind of odor.
  - c. Store mops and sponges so that they will dry completely between uses. Mops must be hung on hooks. Do not store mops or sponges in buckets or slop sink.
  - d. Immediately clean any areas where water has spilled or collected. Contact Engineering and GIS Director if a moisture problem is recurring.

#### **Proper Cleaning Methods (Specific)**

1. Eating Area, Break Room Cleaning
- a. Clean with general purpose cleaner; door knobs, appliances, countertop, table (top and bottom), benches and chairs, and floor.
  - b. Disinfect countertop, tables, chairs and benches and floors after cleaning. Allow disinfectant to set according to manufacturer's directions.

- c. Check floors for debris, food scraps, and any signs of biocontamination at least once daily. Clean if needed.
- d. Tightly cover trash receptacles and empty when  $\frac{3}{4}$  full. Do not allow trash to overflow receptacles.
- e. Place recyclables in appropriate recycling containers.

## 2. Bathroom Cleaning

- a. Remove all visible surface dirt.
  - i. Use a vacuum cleaner if floors and surfaces are dry.
  - ii. For wet areas remove surface dirt with a damp mop or cloth.
- b. Clean with general purpose cleaner; light switches, mirrors, door knobs, showers, countertops, faucets, basins, partitions, toilets, walls, floors, and other surfaces.
- c. Disinfect all showers, countertops, basins, toilets, and floors (only after cleaning).
- d. Allow disinfectant to set in accordance with product directions.
- e. Rinse disinfectant completely with water.
- f. Check that floor drains are flowing completely and are free of odors.
  - i. Flush clogged drains with hot water; only use drain openers if absolutely necessary.
  - ii. Clean odorous drains with a mixture of hot water and a germicidal solution.

## 3. Carpet Cleaning

- a. Vacuum with a beater-bar attachment and a HEPA filtered vacuum cleaner.
- b. While vacuuming, check carpet for stains and spot clean as needed. Stains should be cleaned as soon as possible after the stain is noticed.
- c. If deep cleaning of carpets is needed;
  - i. Vacuum areas to be cleaned prior to deep cleaning.
  - ii. Follow carpet manufacturer's recommended procedure for the particular type of carpet being cleaned.
  - iii. Do not overly wet the carpet. Carpet must be completely dry within 12 hours; utilize a dehumidifier if necessary to remove extra moisture.

## 4. Trash Collection and Recycling

- a. Empty office trash into large container daily, and place outside in generator/trash enclosure.
- b. Empty office recycling containers into building containers daily. When full, remove recyclables to weekly collection location, or stockpile in recycling room until weekly pickup.
- c. Check building recycling containers daily for cleanliness and available capacity.
- d. At a minimum, the following materials are to be recycled; mixed paper, cardboard, Plastics 1 and 2, glass, metals, and batteries.
- e. Clean trash and recycling containers inside and out when dirty.



### **Prohibited Cleaning Methods**

1. Never mix cleaning products together , unless specifically recommended by the manufacturer.
2. Do not mix any products that contain chlorine with those that contain ammonia.

### **Recommended Cleaning Frequency**

The following checklist indicates the desired cleaning frequency of the building areas. Each Janitorial staff should maintain a weekly copy of the checklist to note that all cleaning elements are accomplished.

#### **Yes/No**

##### **RESTROOMS and SHOWER ROOMS – Daily**

1. Damp mop or vacuum floor (to remove debris)
2. Apply appropriate cleaner to interior of toilets and urinals
3. Apply appropriate cleaner to exterior of toilets and urinals
4. Apply appropriate products to sinks and countertops
5. Wipe sinks and countertops with micro-fiber cloth
6. Clean interior of toilets and urinals
7. Cleaner exterior of toilets and urinals
8. Clean switches and door hardware

##### **RESTROOMS and SHOWER ROOMS – Weekly (or sooner if needed)**

1. Fill soap and toilet paper dispensers and empty trash
2. Clean mirrors with glass cleaner
3. Clean and wipe soap and toilet paper dispensers
4. Spot clean walls and toilet partitions
5. Remove soap from shower floors; clean all surfaces with a scrub brush and cleaning solution
6. Mop the floor; make sure to remove any standing water
7. Pour hot water germicidal solution into drain if clogged or odorous.
8. Apply disinfectant and rinse after 10 minutes of set time.

##### **DUSTING – Twice per Week**

1. Use damp or “micro fiber” cloth to remove dust.
2. Generally , dust from top to bottom of surfaces.
3. Dust all hard surfaces, including desktops, sills, ledges, shelves, blinds, and furniture.

##### **DUSTMOPPING/VACUUMING – Weekly**

1. Start from the far end of a room and work towards the door.
2. Do not lift the mop or vacuum from the floor while cleaning. Use a continuous motion.

3. While turning the mop or vacuum overlap the previous cleaning path by at least 2 inches.
4. Remove all accumulated debris with a brush and dustpan.
5. Check the vacuum cleaner bag and replace when  $\frac{3}{4}$  full.
6. Spot clean carpets and other stains as needed.
7. Vacuum HVAC vents, diffusers, registers, and other crevices.
8. Vacuum all fabric covered furniture.

#### ENTRYWAYS – Daily

1. Sweep vestibule with a broom, remove debris with dust pan.
2. Thoroughly vacuum entry mats in both directions
3. Clean glass, door hardware, and walls.

#### ENTRYWAYS- Weekly

1. Contract service to roll up and remove mats, and replace with clean dry mats.
2. Sweep and mop underneath mat areas; do not replace mat until area is completely dry.

#### RECYCLING MATERIALS – Weekly

1. Empty all designated recycling containers.
2. Transport recycling materials to recycling storage room or outdoor container in trash/generator enclosure for pickup.
3. Clean inside and out of any dirty recycling container.

#### FLOOR CARE – CARPET – As needed

1. Apply a spot carpet cleaner when stains or blemishes are found.
2. Remove water from wet areas by blotting with a wet-dry vacuum. Notify Engineering and GIS Director if wet spots are recurring.
3. If needed, apply a prespray to carpet per manufacturer instructions; allow to set, typically for 10-15 minutes.
4. Rinse and extract cleaner with warm water in a single pass
5. Dry carpet in second pass by extracting without using water
6. Regularly check recovery tank and empty into slop sink when full. Check clean water tank and refill as necessary.

#### FLOOR CARE – FINISH AND SEALER – VCT AND TERRAZZO ONLY- as needed

1. Fill bucket with bucket liner with enough finish or sealer to cover work area; do not overfill
2. Place mop in finish or sealer, press excess from mop so that mop does not drip on surfaces
3. Work the mop across the room in 10'x10' increments. Apply finish or sealer in an overlapping figure-8 motion.
4. Once finish or sealer is complete dry a second coat can be applied if desired.

5. Dispose of bucket liner and remaining finish or sealer per manufacturers instructions
6. Completely clean mop, mop wringer, and bucket with water,; hang mop to dry.

**FLOOR CARE- BUFFING – VCT AND TERRAZZO ONLY – as needed**

1. Vacuum and or damp mop floors
2. Apply spray buff to floors in a stream or course spray; do not apply an excessive amount
3. Cover each floor area with at least three passes with a buffing machine and buffer pad, using a broad sweeping motion; recommended buffer speed is 175 rpm.
4. Occassionally check pads for dirt and wear, replace as necessary.
5. After buffing an entire area, remove residue and dust with a microfiber mop.

**FLOOR CARE- BURNISHING – TERRAZZO ONLY – As needed**

1. Vacuum and or damp mop floors
2. Cover each floor area with a single pass of the burnisher, per manufacturers instructions
3. If desired gloss is not achieved, repeat burnishing with a second pass.
4. Occassionally check pads for dirt and wear, replace as necessary
5. After burnishing an entier area, remove residue and dust with a microfiber mop.

**FLOOR CARE- STRIPPING-VCT AND TERRAZZO ONLY- Only as directed, Avoid if possible**

1. Use putty knife or scraper to remove any gum or othe stuck on residue
2. Vacuum and damp mop floors
3. Apply floor stripper, using an edging tool at corners and around baseboard.
4. Do not apply excess stripper ; do not allow stripper to run under doors or onto carpeted areas
5. After stripper has set for the amount of time recommended by the manufacturer, scrub floors with a rotary scrubber; work scrubber in at least two perpendicular directions
6. Ensure that finish or sealer has been completely removed. Apply additional stripper in any area that remains sticky.
7. Mop up all residue with a clean mop, replacing mop water as needed; contain residue in the work area with a squeegee
8. Completely clean work area with fresh , cold water
9. After floor has dried, hand rub the work area to check for remaining residue; re-mop if necessary.

**FLOOR CARE – ARDEX SURFACES, ENTRYWAY AND SHOWER ROOMS - Daily**

1. Vacuum or Pickup litter or debris
2. Damp mop floors

**FLOOR CARE – RUBBER STAIR TREAD AND WORKOUT ROOM SURFACES- Weekly**

1. Damp mop floors

FLOOR CARE- SEALED CONCRETE, BIKE ROOM , FILE ROOM, DATA ROOM, MECHANICAL ROOM, ELEVATOR ROOM – Biweekly or as needed

1. Vacuum and or damp mop floors

### **Product Disposal Procedures**

1. Prevent waste of excess cleaning products.
  - a. Use the entire amount of cleaning product until containers are completely empty before disposing of container.
  - b. Occasionally check cleaning products for expiration dates; be sure to use products prior to their expiration.
2. Properly dispose of cleaning products and packaging materials.
  - a. Follow manufacturers instructions for proper disposal of any excess or old cleaning product.
  - b. Recycle any packaging that is recyclable by placing in the designated recycling area.
  - c. Avoid purchase of any cleaners that cannot be easily disposed, or are in packaging that cannot be recycled.

### **Required Product Standards**

All cleaning an paper products used throughout the building must meet all of the requirements of the standards listed below, as applicable:

1. Green Seal Standard for "Tissue Paper"(GS-01)
2. Green Seal Standard for "Paper Towels and Paper Napkins"(GS-09)
3. Green Seal Standard for "Cleaning/Degreasing Agents"(GS-34)
4. Green Seal Standard for "Industrial and Institutional Cleaners"(GS-37)
5. Green Seal Standard for "Industrial and Institutional Floor Care Products"(GS-40)

In addition, the following criteria must be used when selecting the appropriate cleaning products to be used in the building (see product recommendations for specific requirements);

1. Cleaning products must have easy to read labels and clearly state dilution requirements
2. Undiluted cleaning products should not be corrosive to the skin or eyes
3. Undiluted cleaning products must not contain ingredients that are toxic to humans, or not exceed OSHA exposure limits
4. Give preference to non-aerosol containing cleaning products
5. Cleaning products must not be readily combustible
6. Give preference to cleaning products that come in recyclable packaging and packaging that contains post-consumer waste
7. Ingredients of cleaning products must be readily biodegradable

8. Ingredients of cleaning products must not pollute water resources or contain toxins that are harmful to fish.
9. Cleaning products must not have a phosphorous content that is greater than 0.50% by weight.

### **Required Product Documentation**

Cleaning staff or Supervisor must annually submit a list of all cleaning products that will be used in the building, and at least one of the below requirements to prove that the cleaning products meet the required standards;

1. Provide certification from a third-party agency stating that cleaning products have been tested in accordance with and meet or exceed, Green Seal standards. Certifications must also include all test data required by Green Seal for certification.
2. Proof that the cleaning product has been certified by Green Seal.

### **Prohibited Ingredients List**

Many cleaning products contain toxic chemicals such as human neurotoxins, narcotics, mutagens, terratogens, and carcinogens. Common complaints that are related to the use of cleaning products include; dizziness, headache, fatigue, muscle soreness, eye and lung irritation, irritability, nausea, and heart irregularities. In order to eliminate unnecessary exposure to toxins and prevent the above symptoms of exposure, the following chemicals must be prohibited from use in any cleaning products;

- Alkylphenol ethoxylates- detergent, an endocrine disruptor and highly toxic to aquatic species
- Benzene- solvent, a volatile organic and a known carcinogen
- Chloramine – disinfectant, contributes to asthma
- Carcinogens – Chemicals that are known to cause cancer, as listed in the 11<sup>th</sup> Report on Carcinogens published by the National Toxicology Program and California Proposition 65; List of chemicals Known to the State of California to Cause Cancer
- Chlorhexidine – disinfectant, contributes to asthma
- Chlorine (including chlorinated compounds)- disinfectant, highly corrosive and a severe eye and lung irritant; often contains mercury
- Optical brighteners or fluorescent whitening agents
- Ozone depleting compounds (ODC's)- including CFCs, halons, carbon tetrachloride, and methyl chloroform
- Persistent Bioaccumulative Toxins (PBTs)- chemicals that accumulate in the body and the environment such as PCBs as defined by the EPA PBT Profiler.
- Phthalates and dibutyl phthalate – plasticizer, contributes to liver and kidney abnormalities, probably carcinogen

- Reproductive Toxins – as defined by California Proposition 65; List of Chemicals Known to the State of California to Cause Reproductive Toxicity
- Zinc and zinc compounds – toxic to aquatic species
- Heavy metals (including mercury, lead, cobalt, arsenic, cadmium, chromium) – contribute to neurological disorders, kidney abnormalities, birth defects, high blood pressure, and genetic mutation

In addition to the strictly prohibited ingredients that are listed above, the following chemicals should be minimized where possible:

- Ammonia and ammonium compounds – disinfectant and stain remover, contributes to asthma and skin irritation
- Phosphates – a limiting nutrient in waterways, contribute to algae bloom and fish kills

### Cleaning Product Recommendations

The following is a list of example products for each cleaning application that meet the requirements defined above. All of the products listed below may be used for cleaning in the building, substitute products can be used provided they also meet all the requirements of this plan. Prior to purchase and use, confirm the appropriateness of each cleaning product with the manufacturer for the desired application. Also, determine the appropriate dilution for all concentrated products and provide clear, visible dilution instructions for cleaning staff. Additional requirements that are demanded by specific applications are also provided below.

#### 1. General Janitorial:

##### a. General Purpose Cleaners

- i. The Clean Environmenta Company "all Purpose Cleaner", "Super Orange"
- ii. Cogent Environmental Solutions "ECOgent Light Duty". "ECOgent Heavy Duty"
- iii. EcoLab "Quik Fill General Purpose Cleaner", "Oasis All Purpose cleaner"
- iv. EnvirOx "H2Orange2"
- v. PortionPac "ScrubPac 102, Heavy Duty All Purpose Cleaner"
- vi. Rochester Midland Corporation "Enviro Care Low Foam", Enviro Care Tough Job"

##### b. Glass Cleaners

- i. The Clean Environment company "Glass Cleaner"
- ii. Cleanline Products "H2O2 Concentrate", H2O2 Super Concentrate"
- iii. Cogent Environmental Solutions "ECOgent Glass"
- iv. Eco Lab "Quik Fill Glass Cleaner", "Oasis Glass Cleaner"
- v. EnvirOx "H2Orange2"
- vi. PortionPac "GlassPac 1432, Glass Cleaner"

- vii. Rochester Midland Corporation "Enviro Care Glass Cleaner"
  - c. Degreasers
    - i. CPC Aeroscience "Soyl Away"
    - ii. EcoLab "CitruSolv"
    - iii. Interstate Products "AC-1267 Orange Crystal Powder Degreaser Concentrate", "AC-127 Orange-Solv Degreaser Plus", or "AD-410 Orange Grease Digester Super" (diluted per specs)
- 2. Office Space and Public Areas (also see General Janitorial Above);
  - a. Carpet and Upholstery Cleaners- VOCs may not exceed 1% by weight of undiluted product
    - i. The clean Environment Company "Cycle Emulsifier", "Traffic Lane Cleaner"
    - ii. Cleanline Products "H202 Concentrate", "H202 Super Concentrate"
    - iii. Cogent environmental Solutions "Carpet Extractor", "ECOgent Carpet Pre-Spray"
    - iv. EnvirOx "H2Orange2"
    - v. Rochester Midland Corporation "Enviro Care Carpet Spot Lifter"
- 3. Floor Care Products- avoid products that contain glycol ethers or ammonia. pH should be between 2.5 and 12 (pH of terrazzo products must be between 7.0 and 10.0 as recommended by the National Terraza and Mosaic Association , [www.ntma.com](http://www.ntma.com))
  - a. Floor Stripper
    - i. The Clean Environment Company "Cycle Strip"
    - ii. EcoLab "Air Strip", "Care Strip LO"
    - iii. PortionPac "Janus Green Floor Finish Remover"
    - iv. Rochester Midland Corporation "Enviro Care Floor Finish Remover, Restorer"
  - b. Floor Finish
    - i. The Clean Environment Company "Cycle Finish"
    - ii. EcoLab "Airkem First Base", "Taj Mahal"
    - iii. PortionPac "Janus Green Floor Finish"
    - iv. Rochester Midland Corporation "Enviro Care Conseal Finish Remover, Restorer", "Enviro Care Resilient Tile Coating"
  - c. Floor Maintenance
    - i. The Clean Environment Company "Cycle Spray Buff"
    - ii. EcoLab "Gemstar Gemini", "Gemstar Laser", "Gemstar Polaris", "Huntington Baseline", "Huntington Classic 50 Ultra", "Huntington Front Court"
    - iii. PortionPac "MopPaLite 1802, pH Neutral Floor Cleaner"
    - iv. Rochester Midland Corporation "Enviro Care Tough Job"
- 4. Bathrooms (also see "General Janitorial" above):
  - a. General cleaning
    - i. The Clean Environment Company "Basin, Tub, and Tile Cleaner"

- ii. Cleanline Products "H2O2 Concentrate", "H2O2 Super Concentrate"
  - iii. Cogent Environmental Solutions "ECOgent Bathroom"
  - iv. Environ-Solutions "Washroom Cleaner"
  - v. EnvirOx "H2Orange2", "Grout Safe"
  - vi. PortionPac "BowlPac532, Bathroom Cleaner"
  - vii. Rochester Midland Corporation "Enviro Care Washroom"
- b. Disinfectants – shall never be used in place of cleaning products (use only after areas have been cleaned with a general cleaning product; VOC's may not exceed 1.0% by weight of the undiluted product)
- i. The Clean Environment Company "Cycle-Traffic Lane Cleaner"
  - ii. EnvirOx "H2orange2"
  - iii. Rochester Midland Corporation "Enviro Care Neutral Disinfectant"
- c. Hand Soaps – shall not contain anti-microbial ingredients, such as triclosan; pH should be between 6 and 8.5
- i. The clean Environment Company "Hand Soap"
  - ii. EnvirOx "Earth Friendly Hand Soap"
  - iii. Rochester Midland Corporation "Enviro Care Hand Soap"
- d. Drain Openers
- i. Interstate Products "AC 4510 Orange Grease Digester Super" (in high concentration)
- e. Grout Cleaners
- i. Core Products Company, "Hydroxi Pro Grout Smart"
5. Kitchens, Breakrooms, and Eating Areas (Also see "General Janitorial" and "Bathrooms" above):
- a. Dishwashing Detergents – shall not contain anti-microbial ingredients, such as triclosan
6. Paper Products:
- a. Paper Products used while cleaning and for bathroom tissue/towels
    - i. Eco-Products
    - ii. Putney Paper
    - iii. The Real Earth, Inc.
    - iv. Seventh Generation



### **Staff Training**

All cleaning staff must be trained for all products and methods that are described within this plan. If available, training for proper use of specific products should be provided by a representative of the product manufacturer. If cleaning staff is non-English speaking, provide training in multi-lingual format. Training must include, at a minimum:

1. General orientation of the building, cleaning supply storage areas, and janitor closets
2. Review of this plan, including:
  - a. Intent
  - b. Specific Procedures
  - c. Recommended and restricted products
3. On-site supervised training, including:
  - a. General cleaning practices and techniques
  - b. Proper use and care of housekeeping equipment and supplies
  - c. Proper use and dilution of chemicals and cleaning products
4. Review the Safety Manual and confirm its location for future reference
5. Review Universal Warning Symbols pertaining to hazardous substances
6. Review how to read and interpret a Material Safety Data Sheet (MSDS)
7. Provide checklists and/or posters to cleaning staff that describe procedural requirements in accordance with this plan

Staff training must occur at the following intervals:

1. During orientation for new cleaning staff or when a new Contract is initiated
2. When new products are introduced to the cleaning regiment
3. At least annually thereafter

A Safety Manual must be available on site and accessible to all staff members. If cleaning staff is non-English speaking, provide the Safety Manual in multi-lingual format and provide dilution instructions in pictorial format. The Safety Manual must include at a minimum:

1. Contact information to direct questions about cleaning products
2. Emergency contact in the event of a spill or other hazardous event.
3. MSDS information for all products used on site
4. Step-by-step instructions for the proper use of each product (including use, dilution, and disposal)

## Additional Resources

1. General Information:
  - a. Agency for Toxic Substances and Disease Registry, <http://atsdr.cdc.gov>
  - b. Center For Disease Control and Prevention, [www.cdc.gov](http://www.cdc.gov)
  - c. Center for Health, Environment and Justice, [www.chej.org](http://www.chej.org)
  - d. Environmental Protection Agency (EPA), [www.epa.gov](http://www.epa.gov)
  - e. European Eco-Label Catalogue, [www.eco-label.com](http://www.eco-label.com)
  - f. Green Seal, [www.greenseal.org](http://www.greenseal.org)
  - g. Healthy Schools Network, *Guide to Healthier Cleaning & Maintenance Practices and Products*, [www.healthyschools.org](http://www.healthyschools.org)
  - h. Inform, *cleaning for Health: Products and Practices for a Safer Indoor Environment*, [www.informinc.org](http://www.informinc.org)
  - i. Institute for Health and Environment, [www.albany.edu/ihe](http://www.albany.edu/ihe)
  - j. National Institute of Environmental Health Sciences (NIEHS), [www.niehs.nih.gov](http://www.niehs.nih.gov)
  - k. Natural Resources Defense Council (NRDC), [www.nrdc.org](http://www.nrdc.org)
  - l. New American Dream, *List of Approved Cleaning Products*, [www.newdream.org](http://www.newdream.org)
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## Definitions

### A

**Antimicrobial** - An agent that destroys or inhibits the growth of micro-organisms, such as bacteria and fungi

**ASTM** - American Society for Testing and Materials

### B

**Bathroom Cleaners** - A category of products used to clean hard surfaces in a bathroom. 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.

**Bio-Accumulation** - The tendency of a substance to concentrate in the tissues of organisms over time.

**Biodegradable** - Material that can be broken down by microorganisms into simpler, more stable compounds

**BOD** - Biological oxygen demand

**Building-Related Illness** - Illness whose cause and symptoms can be diagnosed and attributed to a specific pollutant source within a building

### C

**Carcinogen** - A chemical listed as a known, probable, or possible human carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), the U.S. Environmental Protection Agency, or the Occupational Health and Safety Administration.

**CPSC** - Consumer Product Safety Commission

**Concentrate** - A product that must be diluted by at least eight parts by volume water prior to its intended use.

**Contaminant** - A substance that has an adverse effect on soil, air, water, and/or living organisms

**Corrosive** - A substance that causes visible destruction or other irreversible harm to living tissue by chemical action.

### D

**Dispensing System Concentrate** - Products designed to be used in dispensing systems that cannot be practically accessed by users.

**Disinfectant** - Products used on hard surfaces to destroy or inactivate microbial life, but not necessarily their spores. Not all disinfectants destroy all types of microbes.

**DOC** - Dissolved organic carbon

### F

**FIFRA** - Federal Insecticide, Fungicide, and Rodenticide Act

**Fungus** - A group of plant-like organisms that lack chlorophyll such as mildew, mold, yeast and mushrooms

### G

**Glass Cleaners** - A category of products used to clean windows, glass, and polished surfaces.

**General Purpose Cleaners** - Products used for routine cleaning of hard surfaces including impervious flooring such as concrete, tile, countertops, or linoleum.

### H

**HSDB** - Hazardous Substance Data Bank

## I

**IAQ (Indoor Air Quality)** - Considered to be acceptable when no known air-borne contaminants exist at concentrations that may be harmful or cause irritation.

**Ingredient** - Any constituent of a product, whether intentionally added or not, that comprises at least 0.01% by weight of the product.

**ISO** - International Organization for Standardization

**IARC (International Agency for Research on Cancer)** - An arm of the World Health Organization that studies association between substances and cancer.

## M

**Microbial Growth** - Multiplication of microorganisms such as fungi and bacteria

**Mutagen** - A substance that has been linked to increased rates of genetic mutation (above the average rate).

## N

**Neurotoxin** - A substance with toxic effects on any portion of the central or peripheral nervous system.

**NIOSH (National Institute for Occupational Safety and Health)** - Part of the U.S. Department of Health and Human Services that conducts research and makes recommendations on health and safety standards, including setting short- and long-term exposure limits for many chemicals.

## O

**Off-Gassing** - The vaporization of chemical compounds into surrounding air.

**Optical Brighteners** - Additives designed to enhance the appearance of colors and whiteness in materials by absorbing ultraviolet radiation and emitting blue radiation. Also known as fluorescent whitening agents.

**OSHA** - Occupational Safety and Health Administration

**Ozone Depleting Compound (ODC)** - Any compound with the potential to deplete stratospheric ozone.

**Ozone Depleting Potential (ODP)** - A relative measure of the ability of a substance to break down the stratospheric ozone layer.

## P

**Post-Consumer** - Waste material that has served an intended use.

**Post-Industrial** - Waste material from manufacturing processes.

**Ppm** - Parts per million

**Primary Packaging** - The material physically containing and coming into contact with the product, not including the cap or lid of a bottle.

**Product as Used** - The most concentrated form of the product that the manufacturer recommends for an intended use.

## R

**Recyclable Packaging** - Any packaging that can be diverted from the waste stream through available processes and programs and returned to use in the form of raw materials or products.

**Reproductive Toxin** - A chemical which may cause birth defects or sterility.

**RTECS** - Registry of Toxic Effects of Chemical Substances

## S

**Sanitizer** - Products that reduce, but do not necessarily eliminate, micro-organisms to level that are considered safe

**Sick Building Syndrome** - A phenomenon in which building occupants experience a variety of health and/or comfort effects linked to time spent in a particular building, but where no specific illness or

causative agent can be identified. Symptoms in sufferers often include headaches, eye irritation, and respiratory irritation.

**Sterilizer** - Products used to destroy or eliminate all forms of microbial life, including spores. Primarily used in healthcare settings.

## **T**

**Terratogen** - A substance that has been directly linked to birth defects during human fetus development.

**Toxicity** - The degree to which a material causes or threatens to cause adverse health effects to living organisms at a given concentration. Expressed in exposure limits.

**TVOC** - Total Volatile Organic Compounds; see VOC (Volatile Organic Compound)

## **U**

**Undiluted Product** - The most concentrated form of a product produced by a manufacturer for transport outside its Facility.

## **V**

**VOC (Volatile Organic Compound)** - Chemical compounds that contain carbon and that partially vaporize at normal room temperature. VOCs are a group of chemicals that have varying degrees of toxicity and effects.

