

Environmental Building Operations Policies:
IEQp3: Green Cleaning Policy
IEQc3.1: High-Performance Cleaning Program

[Standard Template]

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IEQp3: Green Cleaning Policy

IEQc3.1: High-Performance Cleaning Program

[Building Name]

The Environmental Building Operations Policies are meant to be used by property management teams to institutionalize environmental procedures within existing building operations. The policy provided herein covers green cleaning. This policy is a requirement for LEED for Existing Buildings: Operations and Maintenance (LEED EB:O&M). LEED EB:O&M is a green building rating system developed and administered by the U.S. Green Building Council (USGBC). All policies and plans must meet the LEED EB:O&M prerequisite and credit requirements.

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1. Introduction

This policy establishes the best management practices for operating in a manner that takes into consideration the long-term health and environmental effects of cleaning practices. Green cleaning goes beyond using low environmental impact cleaning products. It also accounts for the impacts of the cleaning process, the waste stream of cleaning products and packaging, and the effects on human health and comfort.

Green cleaning choices directly impact health and well-being and help transform the marketplace by creating a greater demand for green cleaning products and services. The Green Cleaning Policy & Program addresses this by employing environmentally responsible standards in cleaning practices. Through the Green Cleaning Policy & Program, [Building Name] ensures that business practices and contracting of services support the following key environmental concerns:

- *Water Conservation*: Reducing the use of potable water and contributing to the preservation of natural water supplies
- *Indoor Air Quality* - Eliminating or managing volatile organic compounds and toxic off-gassing to maintain a healthy work environment
- *Waste Management*: Curbing consumption, recycling materials and purchasing products with recycled content to reduce overall waste generated
- *Improved Live/Work Environment*: Providing a safe, comfortable and accessible live/work environment for employees and building occupants, including cleaning staff
- *Bottom Line Improvements*: Green cleaning practices help encourage a competitive market for sustainable products and services which, in turn, will also lead to lowering costs.

The policy is based on the requirements of the LEED EB: O&M rating system as excerpted from the v2009 edition:

LEED EB: O&M Requirements

IEQp3: Green Cleaning Policy (Prerequisite, Required)

Have in place a green cleaning policy for the building and site addressing the following green cleaning credits and other requirements:

- Purchase sustainable cleaning and hard floor and carpet care products meeting the sustainability criteria outlined in IEQc3.3: Green Cleaning - Purchase of Sustainable Cleaning Products and Materials.
- Purchase cleaning equipment meeting the sustainability criteria outlined in IEQc3.4: Green Cleaning - Sustainable Cleaning Equipment.
- Establish standard operating procedures addressing how an effective cleaning and hard floor and carpet maintenance system will be consistently utilized, managed and audited. Specifically address cleaning to protect vulnerable building occupants.
- Develop strategies for promoting and improving hand hygiene, including both hand washing and the use of alcohol-based waterless hand sanitizers.
- Develop guidelines addressing the safe handling and storage of cleaning chemicals used in the building, including a plan for managing hazardous spills or mishandling incidents.
- Develop requirements for staffing and training of maintenance personnel appropriate to the needs of the building. Specifically address the training of maintenance personnel in the hazards of use, disposal and recycling of cleaning chemicals, dispensing equipment and packaging.

- Provide for collecting occupant feedback and continuous improvement to evaluate new technologies, procedures and processes.

This policy must adhere to the LEED v2009 Existing Buildings: Operations & Maintenance policy model.

IEQc3.1: Green Cleaning - High Performance Cleaning Program (1 point)

Have in place during the performance period a high-performance cleaning program, supported by a green cleaning policy (IEQp3: Green Cleaning Policy), that addresses the following:

- Provide an appropriate staffing plan.
- Implement a training of maintenance personnel in the hazards, use, maintenance, disposal and recycling of cleaning chemicals, dispensing equipment and packaging.
- Use chemical concentrates with appropriate dilution system to minimize chemical use wherever possible.
- Use sustainable cleaning materials, products, equipment, janitorial paper products and trash bags (including microfiber tools and wipes).
- Use sustainable cleaning and hard floor and carpet care products meeting the sustainability criteria outlined in IEQc3.3: Green Cleaning - Purchase of Sustainable Cleaning Products and Materials.
- Use cleaning equipment meeting the sustainability criteria outlined in IEQc3.4: Green Cleaning - Sustainable Cleaning Equipment.

The policy covers all the green cleaning procedures and materials within the building, regardless if not under the building site management's control.

2. Goals and Scope

The goal of the Environmental Building Operations Policy for Green Cleaning is to utilize green cleaning products and practices to improve the indoor air quality of the building and to reduce the exposure of building occupants and maintenance personnel to contaminants that have an adverse effect on health and comfort.

Specific Green Cleaning Policy goals have been set forth to reflect environmental concerns:

- Increase efficiency by controlling polluting sources, streamlining cleaning processes, reducing the use of electric cleaning equipment, and using energy-efficient equipment when possible
- Reducing the use of potable water for cleaning purposes
- Minimizing hazardous materials and chemicals in the cleaning process in order to continuously improve the indoor air quality and overall health of the work environment
- Minimizing material waste with efficient cleaning practices and products
- Reducing the amount of toxic and hazardous materials that exit the building as wastewater

Specific High Performance Cleaning Program goals include:

- Selecting a vendor committed to supporting the Green Cleaning Policy (IEQp3)
- Develop an appropriate staffing plan to meet building needs and plans
- Implement a comprehensive training program for maintenance staff, which covers, at a minimum the following areas:
 - ◊ Intent and goals of sustainable cleaning

- ◇ Specific training on recyclable vs. non-recyclable products
- ◇ Hazards, uses and disposal of cleaning products and chemicals
- ◇ Appropriate dilution of chemical concentrates, including details on how to create the diluted product
- ◇ Uses of cleaning materials, products and equipment
- ◇ Proper care for hard floor and carpeted surfaces

The scope of this policy includes the requirements for the daily cleaning and light duty maintenance of the property’s interior spaces. This includes, but is not limited to, the cleaning of common lobbies, hallways, restrooms, cafeteria areas, kitchenettes, elevators and other public spaces. Tenant spaces are also included in the scope of this policy if building management provides the cleaning service for the tenants and their leased spaces. The policy and program addresses purchasing sustainable cleaning, hard-floor and carpet products, and entryway systems; procuring sustainable cleaning equipment; developing and implementing standard operating procedures for effective cleaning; promoting and improving hand hygiene; developing guidelines for handling cleaning chemicals; developing staffing and employee training requirements; collecting and addressing occupant feedback; and establishing procedures for use of chemical concentrates and dilution systems. If cleaning services are contracted to an external service provider, that provider is responsible for carrying out their services in accordance with this policy without exception.

3. Responsibilities

The Property Management Team ([Senior Property Manager, Property Manager, Assistant Property Manager, Property Coordinator]) will be responsible for informing all building personnel and tenants of this green cleaning policy. Moreover, the Property Management Team will be responsible for implementing the practices set forth in this document in order to ensure the standards specified within are upheld. The Property Management Team may delegate certain duties relating to green cleaning to staffers, but will bear ultimate responsibility for the effective implementation of the policy.

Green cleaning strategies for the building shall include actions performed by the following contractors:

Function	Company Name	Primary Contact	Phone
Janitorial	[Janitorial Vendor]	[Vendor Representative]	[Phone]

4. Time Period

The policy is to take effect immediately and shall continue indefinitely or until amended and/or replaced by a subsequent green cleaning policy and program. While some outstanding contracts may prevent building operations and maintenance personnel from immediately abiding by certain policy requirements, those responsible for cleaning service contracts will ensure that new policy language is included in all subsequent contracts.

5. Performance Metric

Performance will be measured through compliance with the requirements of the following LEED EB: O&M credits:

- IEQc3.3: Green Cleaning - Purchase of Sustainable Cleaning Products and Materials
 - ◇ At least 30% of total cleaning products and materials purchases, by cost

- IEQc3.4: Green Cleaning - Sustainable Cleaning Equipment
 - ◇ At least 20% of janitorial equipment in use and all janitorial equipment purchases, by cost or quantity
- IEQc3.5: Green Cleaning - Indoor Chemical and Pollutant Source Control
 - ◇ Permanent entryway systems at least 10 feet long at all public entryway points
- IEQc3.6: Green Cleaning - Indoor Integrated Pest Management
 - ◇ Implementation of indoor integrated pest management (IPM) plan utilizing least-risk options

6. Procedures and Strategies

A. Cleaning Products

PERFORMANCE METRICS AND MEASUREMENT

The practices listed below shall be implemented, to the extent possible, with a target goal of at least 30% of products complying, based on cost. The Property Management Team shall track purchase rates of both compliant and noncompliant products in ProAct.

PRACTICES TO OPTIMIZE USE OF SUSTAINABLE CLEANING PRODUCTS

Cleaning products and materials, including hard-floor and carpet-care products, used at [Building Name] shall, when possible, meet the requirements of IEQc3.3: Green Cleaning - Purchase of Sustainable Cleaning Products and Materials.

Product types subject to these requirements include, but are not limited to, bio-enzymatic cleaners, hard-floor cleaners, carpet cleaners, general-purpose cleaners, specialty cleaners, odor control, disinfectants, disposable janitorial paper products and trash bags, and hand soaps.

IEQc3.3: Green Cleaning - Purchase of Sustainable Cleaning Products and Materials Criteria:

- The cleaning products meet one or more of the following standards for the appropriate category:
 - ◇ Green Seal GS-37, for general-purpose, bathroom, glass and carpet cleaners used for industrial and institutional purposes;
 - ◇ UL EcoLogo 2792, for cleaning and degreasing compounds;
 - ◇ UL EcoLogo 2759, for hard-surface cleaners;
 - ◇ UL EcoLogo 2795, for carpet and upholstery care;
 - ◇ Green Seal GS-40, for industrial and institutional floor care products;
 - ◇ UL EcoLogo 2777, for hard-floor care;
 - ◇ EPA Safer Choice Standard; and/or
 - ◇ Cleaning devices that use only ionized water or electrolyzed water and have third-party-verified performance data equivalent to the other standards mentioned above (if the device is marketed for antimicrobial cleaning, performance data must demonstrate antimicrobial performance comparable to EPA Office of Pollution Prevention and Toxics and Design for the Environment requirements, as appropriate for use patterns and marketing claims).
 - ◇
- Disinfectants, metal polish, floor finishes, strippers or other products not addressed by GS-37 or Environmental Choice CCD-110, 146 or 148 shall meet at least one of the following standards for the appropriate category:
 - ◇ UL EcoLogo 2798, for digestion additives for cleaning and odor control;
 - ◇ UL EcoLogo 2791, for drain or grease trap additives;

- ◇ UL EcoLogo 2796, for odor control additives;
 - ◇ Green Seal GS-52/53, for specialty cleaning products;
 - ◇ California Code of Regulations maximum allowable VOC levels for the specific product category;
 - ◇ EPA Safer Choice Standard; and/or
 - ◇ Cleaning devices that use only ionized water or electrolyzed water and have third-party-verified performance data equivalent to the other standards mentioned above (if the device is marketed for antimicrobial cleaning, performance data must demonstrate antimicrobial performance comparable to EPA Office of Pollution Prevention and Toxics and Design for the Environment requirements, as appropriate for use patterns and marketing claims).
- Disposable janitorial paper products and trash bags meet the minimum requirements of one or more of the following programs for the applicable product category:
 - ◇ EPA comprehensive procurement guidelines, for janitorial paper;
 - ◇ Green Seal GS-01, for tissue paper, paper towels and napkins;
 - ◇ UL EcoLogo 175, for toilet tissue;
 - ◇ UL EcoLogo 175, for hand towels;
 - ◇ Janitorial paper products derived from rapidly renewable resources or made from tree-free fibers;
 - ◇ FSC certification, for fiber procurement;
 - ◇ EPA comprehensive procurement guidelines, for plastic trash can liners; and/or
 - ◇ California integrated waste management requirements, for plastic trash can liners (California Code of Regulations Title 14, Chapter 4, Article 5, or SABRC 42290-42297 Recycled Content Plastic Trash Bag Program).
 - Hand soaps meet one or more of the following standards:
 - ◇ no antimicrobial agents (other than as a preservative) except where required by health codes and other regulations (e.g., food service and health care requirements);
 - ◇ Green Seal GS-41, for industrial and institutional hand cleaners;
 - ◇ UL EcoLogo 2784, for hand cleaners and hand soaps;
 - ◇ UL EcoLogo 2783, for hand sanitizers;
 - ◇ EPA Safer Choice Standard.

B. Cleaning Equipment

PERFORMANCE METRICS AND MEASUREMENT

All newly acquired cleaning equipment shall comply with the criteria listed below. The Property Management Team shall track the percentage of all equipment that meets the criteria, based on cost or number of pieces of equipment, with a target of at least 20%.

PRACTICES TO OPTIMIZE USE OF SUSTAINABLE CLEANING EQUIPMENT

Purchase Criteria

All new equipment acquisitions shall comply with the requirements of IEQc3.4: Green Cleaning - Sustainable Cleaning Equipment:

- Vacuum cleaners meet the requirements of the Carpet and Rug Institute “Green Label” Testing Program - Vacuum Cleaner Criteria and are capable of capturing 96% of particulates 0.3 microns in size and shall operate with a sound level less than 70 dBA.
- Carpet extraction equipment for restorative, deep cleaning is certified by the Carpet and Rug Institute’s “Seal of Approval” Testing Program for deep-cleaning extractors.

- Powered floor equipment - ex. electric- and battery-powered floor buffers and burnishers - is equipped with vacuums, guards and/or other devices for capturing fine particulates, and operates with a sound level less than 70 dBA.
- Propane-powered floor equipment has high-efficiency, low-emission engines with a catalytic converter and mufflers that meet California Air Resources Board (CARB) or Environmental Protection Agency (EPA) standards for the specific engine size and operate with a sound level of less than 90 dBA.
- Automated scrubbing machines are equipped with variable-speed feed pumps and onboard chemical metering to optimize the use of cleaning fluids. Alternatively, the scrubbing machines use only tap water with no added cleaning products.
- Battery-powered equipment is equipped with environmentally preferable gel batteries.
- Powered equipment is ergonomically designed to minimize vibration, noise and user fatigue.
- Equipment is designed with safeguards, such as rollers or rubber bumpers, to reduce potential damage to building surfaces.

Record-keeping

ProAct logs shall be maintained for all powered cleaning equipment to document the date of purchase and all repair and maintenance activities. Vendor cut sheets for all equipment used onsite shall be stored in the ProAct log. When cleaning equipment replacement is necessary, acquisition dates and supporting documentation shall be retained to demonstrate that all newly acquired equipment complies with the specifications.

C. Hard-Floor and Carpet Maintenance

PERFORMANCE METRICS AND MEASUREMENT

Floor-care maintenance shall consistently be performed according to written protocols, without exception. QC checks will be used to ensure 100% adoption.

PRACTICES TO OPTIMIZE HARD-FLOOR AND CARPET MAINTENANCE

HARD FLOOR MAINTENANCE

Floor Stripping

1. Notify occupants beforehand if a strip-out is scheduled.
2. Select environmentally preferable product, as specified by Green Seal GS-40 standard or California Code of Regulations for maximum allowable VOC content. Mix and use products according to label directions.
3. Ventilate area and building during and after stripping.
4. Especially when stripping floors, it is preferable to conduct these activities on a weekend or some other extended time period when occupants will not be in the building. This allows maximum time for the building to be ventilated (flushed with fresh air) prior to the return of the occupants.
5. Prep the area by placing wet floor signs, caution tape and other blockages around area to be stripped.
6. Assemble equipment and supplies.
 - ◇ Assemble two mop heads and handles. If not color coded, label "Strip Mop" and the other "Rinse Mop".
 - ◇ Assemble two mop buckets and wringers. Label one bucket "Strip" and the other "Rinse".
 - ◇ Place the appropriate stripping pad on the rotary floor machine. Fill the strip bucket with hot water unless the product label recommends cold and mix with stripper. Fill the rinse bucket with clean, cold water.
 - ◇ Place all equipment in the area where the work will begin.

7. Remove free standing objects. Vacuum and remove walk-off mats.
8. Dust mop or vacuum the area. Remove all gum and other sticky residue from floor with putty knife.
9. Apply foaming stripper to baseboards, if necessary. Prepare to control liquid flow.
10. Apply stripper to floor. Dip "Strip" mop into "Strip" bucket. Lift mop allowing excess to drip into bucket. Apply to floor. Apply sufficient solution, but be sure not to over wet which may lead to solution traveling under doors or onto carpet. Outline at 10x10 foot area and fill in using an overlapping pattern. Let solution dwell for 5 to 10 minutes. Do not allow solution to dry. Re-apply as necessary to keep floor wet.
11. Use edging tool to loosen finish close to baseboards and corners.
12. Scrub the floor with a rotary floor machine after the stripping solution has had time to work. Scrub across the work area, retreat as necessary.
13. Check progress. If any floor finish remains, apply more stripper and increase dwell time. Don't let floor dry.
14. Rinse the floor using the "Rinse" mop and bucket. Use a floor squeegee to manage the slurry.
15. Pick up slurry with wet-vac or mop and bucket.
16. Rinse the floor again with clean cold water.
17. When the floor dries, rub hand over it. If there is a residue, rinse again.
18. Once the floor is dry and free of residue and glossy areas (signs of finish or sealer), it is ready to be coated.

Finish/Sealer Application

1. Apply finishes or sealers with a clean rayon mop head or micro-fiber flat mop.
2. Use clean buckets with clean wheels.
3. Line bucket with fitted trash liner.
4. Use finish or sealer that meets the California Code of Regulations for maximum allowable VOC content, or one that is Green Seal (GS-40) certified.
5. Apply even coats.
6. Don't force dry finish with a fan.
7. Put on appropriate Personal Protective Equipment, as stated on the product label and MSDS.
8. Post wet floor signs and blockades.
9. Pour enough sealer or finish into the bucket for the area.

Buffing and Burnishing

1. Make sure that adequate floor finish exists.
2. Select the appropriate restoration products. Water-based, low VOC products are preferred.
3. Apply product in a stream or coarse spray instead of a wide-angle mist to minimize the amount that becomes airborne and inhaled or over sprayed. Do not over apply.
4. Be sure that the pad matches the machine speed and the finish type.
5. Put on appropriate Personal Protective Equipment, as stated on the product label and MSDS.
6. Post wet floor signs and blockades.
7. Dust mop and damp mop the floor. The use of a micro-fiber flat mop is preferred.
8. Change pads as necessary.
9. Dust mop the floor after the entire area has been buffed.
10. Clean equipment and return it to its proper place.
11. Remove wet floor signs and/or other blockades.

Low environmental impact janitorial equipment includes the use of durable carpet care equipment, such as upright, backpack and wide area vacuums meeting or exceeding the Carpet & Rug Institute “Green Label” and capable of capturing 96% of particulates 0.3 microns in size.

Carpet extraction equipment shall be capable of removing sufficient moisture such that carpets can dry in less than 24 hours. Carpet care equipment shall be electric- or battery-powered and shall have a maximum sound level less than 70 dBA.

Wherever possible, carpet extraction method that reduces chemical use will be used. Carpet extraction equipment that has earned the “Seal of Approval” from Carpet & Rug Institute is preferred.

Carpet Pre-Spray & Extraction

Carpets can act as a “sink” that allows particles, allergens and other unwanted material to filter down into the backing of carpets. Once down deep in the carpet these unwanted materials can lead to damage of the fibers and the need to ultimately replace the carpets sooner than properly maintained carpeting. But from a health perspective, one of the biggest enemies of a healthy indoor environment is when moisture provides an opportunity for biological growth in the carpets. Thus, pre-spraying carpet and rinsing with an extractor should get deep down into the carpets and remove the unwanted contaminants.

1. Minimize the amount of cleaning chemicals used.
2. Use appropriate functioning equipment that will maximize the amount of water being extracted from the carpet to minimize moisture and potential for mold, mildew and bacterial growth.
3. Increase ventilation. Open windows if weather allows and use carpet fan to dry carpets quickly.
4. Dispose of cleaning solutions properly.
5. Dry the carpet with a carpet fan.
 - ◇ Place the fan out of traffic areas.
 - ◇ Turn up HVAC or open doors and windows.
6. Raise the carpet nap.
 - ◇ Finish the job with a vacuum cleaner or carpet rake.
7. Remove wet floor sign or other blockades after carpet is dry.
8. Never cover wet carpeting with a mat.

D. Entryway Systems

PERFORMANCE METRIC

Protocols promoting effective use of entryway systems shall be wholly adopted. Quality control checks shall be used to ensure 100% adoption.

PRACTICES TO OPTIMIZE USE AND MAINTENANCE OF ENTRYWAY SYSTEMS

ENTRYWAY SYSTEMS MAINTENANCE

Properly installed and maintained entryway systems greatly reduce the amount of foreign matter tracked into the building, reduce the risk of slips/falls inside the building, and protect the building flooring systems from excessive wear and tear, thereby reducing interior maintenance requirements.

It is recommended that proper mats or grills (at least 10 feet in length of applicable material) be permanently installed at each entry within the building, to help remove dust and particles from visitor’s shoes and prevent dirt, dust, pollen and other particles from being tracked into the building at all times.

Additional mat systems and application shall be specified and applied as seasonally appropriate. Example, in the winter when grit and water are prevalent, a dual (external/internal) mat system may be required to adequately protect the building and to supplement the permanent system installed at the entryway.

[Janitorial Vendor] will be responsible for cleaning and maintaining entryway systems and mats. A log shall be maintained to document that the systems have been effectively maintained. The log and system performance shall be reviewed at least annually by the Property Manager.

ENTRYWAY MAINTENANCE PROCEDURES (DAILY)

Exterior

1. Empty and clean trash cans and ash urns. All ash urns need to be at least 25 feet away from any opening to the building.
2. Clean doors, door handles and kick-plates with appropriate GS-37 cleaner.
3. Sweep exterior sidewalk and vestibule with a high-quality push-broom or mechanized sweeper or vacuum.
4. Vacuum entryway matting if present.

Interior

1. Clean walls, doors, door-handles, push plates and kick-plates.
2. Vacuum matting in both directions.
3. Dust mop or vacuum entryway flooring.
4. Repeat more frequently if heavy soil is present.

ENTRYWAY MAINTENANCE PROCEDURES (PERIODIC)

Exterior

1. Roll up and remove matting if possible.
2. Sweep underneath matting.
3. Place wet floor signs and/or caution tape.
4. Reinstall matting once entryway and matting is dry.

Interior

1. When necessary steam extract with low moisture system to be dry in less than one hour.
2. Roll up and remove removable matting/grating.
3. Place wet floor signs and/or caution tape.
4. Damp mop entryway.
5. Remove wet floor signs and/or caution tape when the area is dry.

NOTE: Periodic procedures should be repeated as needed based on weather conditions and soil loads.

E. Dusting, Dust Mopping and Vacuuming

PERFORMANCE METRICS AND MEASUREMENT

Protocols promoting effective use of dusting, dust mopping and vacuuming shall be wholly adopted. QC checks will be used to ensure 100% adoption.

PRACTICES TO OPTIMIZE DUSTING, DUST MOPPING AND VACUUMING

Traditional dusting and dust mopping techniques frequently move dust and other contaminants from one area to another, such as from a bookshelf to the floor. It is important to recognize that moving the dust

from one place to another wastes labor and reduces efficiencies. Dusting and dust mopping activities that do not capture soils completely stir them into the air where people can then be exposed to the particles.

DUSTING

- Use only dusting tools that capture and remove the dust.
- Micro-fiber, lint-free dusting cloths and vacuums are preferred instead of feather dusters.
- It is preferable to use vacuum cleaners that meet the Carpet & Rug Institute's (CRI) Green Label Program and be fitted with appropriate bags; HEPA filters could also be used.
- Always use a folded cloth and be sure to refold when full of soil. Refolding provides more cleaning surface area and maximizes use of the cloth.
- Minimize the use of dusting chemicals and if required use water or water based dusting chemicals.
- Wear personal protective equipment per label directions.
- Be sure to use appropriately sized attachments if using a vacuum.
- Dust from top to bottom.
- Be thorough and get hard to reach areas.

DUST MOPPING AND VACUUMING

- A micro-fiber flat mop is preferred over a dry or chemically treated cotton mop.
- If using a micro-fiber mop, choose the widest mop possible taking into consideration the area, obstructions, unevenness of the floor, etc.
- If using a vacuum, be sure to use a wide area hard floor attachment to maximize soil removal and to minimize labor.
- CRI's Green Label Program and/or HEPA filters are preferred for vacuums.
- Put on appropriate personal protective equipment, as stated on the product label and MSDS.
- Using a putty knife, carefully remove any gum or other debris stuck to the floor. Start from a far corner and work toward the door.
- When using a micro-fiber flat mop, use a continuous motion, without lifting the mop from the floor.
- Typically begin next to the wall, when turning, pivot so that the leading edge remains the same. Overlap the previously mopped path by 2 to 4 inches to ensure complete coverage.
- When completely finished, pick up the collected debris using a counter brush and dust pan or vacuum.
- When the micro-fiber no longer attracts soil, it will need to be laundered. Vacuum bags should be checked periodically and changed out when they become over half-full.

F. Restrooms Cleaning

PERFORMANCE METRICS AND MEASUREMENT

Protocols promoting effective restrooms cleaning shall be wholly adopted. QC checks will be used to ensure 100% adoption.

PRACTICES TO OPTIMIZE RESTROOMS CLEANING

Large trash cans should be utilized to minimize overflow of waste and reduce the frequency for policing the area. It is often beneficial to place a trash can receptacle by the door for each disposal of towels to prevent them from being thrown on the floor.

- Make sure cleaning and disinfecting solutions are prepared and used according to label direction (i.e. dwell time).
- Use cleaners that meet Green Seal (GS-37) certification where possible.
- Frequently clean surfaces that hands touch to eliminate the spread of germs (i.e. door knobs, light switches, handles, etc.).
- Address moisture problems.
- Keep floor dry to eliminate slip-fall injuries and prevent the build-up of bacteria, mold and mildew.
- Never use the toilet bowl mop for urinals, since this could cause cross-contamination.
- When water-free urinals and/or composting toilets are used, follow manufacturer's specified cleaning techniques only and NEVER pour water or cleaning chemicals into these fixtures unless specifically directed by the manufacturer.
- Use a floor scraper or putty knife to remove any items stuck to the floor.
- Start at the farthest corner and work toward the door.
- Give the cleaners time to work. Check label directions for recommended contact time.
- Remove gloves before refilling dispensers.
- Refill dispensers in a consistent order to avoid misses.
- Micro-fiber is preferable to wipe sinks and counter tops.
- Be careful to return the toilet brush to the cart without contaminating other supplies.

G. Food Areas: Cafeteria, Break Rooms, Etc. Cleaning

PERFORMANCE METRICS AND MEASUREMENT

Protocols promoting effective food areas: cafeteria, break rooms, etc. cleaning shall be wholly adopted. QC checks will be used to ensure 100% adoption.

PRACTICES TO OPTIMIZE FOOD AREAS: CAFETERIA, BREAK ROOMS, ETC. CLEANING

Particular attention should be paid to food waste, trash receptacles containing food debris, recyclables such as soda cans and other objects that contain food residue that can attract pests. Making every effort to eliminate those things that attract pests is critical to protecting occupant health by reducing or eliminating the need for pesticides inside the building. Ask occupants to rinse out food and drink containers before placing in recyclable collection. Refrigerators used by occupants for their personal use should be emptied and cleaned periodically by the occupants. Integrated Pest Management (IPM) should be followed.

H. OSHA Blood-Borne Pathogen Standard

PERFORMANCE METRICS AND MEASUREMENT

Protocols promoting effective OSHA Blood-Borne Pathogen Standard shall be wholly adopted. QC checks will be used to ensure 100% adoption.

PRACTICES TO OPTIMIZE OSHA BLOOD-BORNE PATHOGEN STANDARD

OSHA required procedures and training on the Blood-Borne Pathogen Standard 9 is not changed in this Green Cleaning Policy & Program as the requirements are mandated by federal law. The Blood-Borne Pathogen Standard requires, among other things, the use of an EPA registered tuberculocidal product, or an EPA registered product with claims against both HBV and HIV.

I. Hand Hygiene

PERFORMANCE METRICS AND MEASUREMENT

Protocols promoting hand hygiene shall be wholly adopted. QC checks will be used to ensure 100% adoption.

PRACTICES TO OPTIMIZE HAND HYGIENE WORKPLACE WELLNESS

Products which are positioned to promote and improve hand hygiene, which include GS-41 hand washing soaps and waterless hand sanitizers. The goal of this requirement is to fight the spread of germs in the workplace through hand washing and the use of hand sanitizers.

J. Handling and Storage of Cleaning Chemicals

PERFORMANCE METRICS AND MEASUREMENT

Protocols governing safe handling and storage of cleaning chemicals shall be wholly adopted. QC checks will be used to ensure 100% adoption.

PRACTICES TO OPTIMIZE HANDLING AND STORAGE OF CLEANING CHEMICALS

The following protocols have been established to mitigate spills, leaks and mismanagement.

ISOLATED CHEMICAL STORAGE AND MIXING AREAS

Proper isolation, storage and handling of chemicals reduce the risk of occupant exposure to potentially hazardous materials.

All housekeeping chemicals will be stored in isolated areas of the building in a secure area. Proper isolation includes:

- Locked doorways and full height (floor to floor deck) partitions with access for authorized janitorial staff and property management only.
- Proper ventilation systems to assure direct-to-outside air exhaust, no air recirculation, and negative static pressure in the storage room.
- Hot and cold water supplies and sink drains plumbed for appropriate disposal of liquid wastes.

KRC will maintain building plan drawings indicating all areas where chemical storage and mixing occurs in the building, and shall document appropriate design and maintenance of the supporting building systems. Janitorial specifications will dictate where chemical storage and mixing occurs in the building. Janitorial practices shall be reviewed by [Janitorial Vendor] at least annually to assure compliance with these requirements.

CHEMICAL DILUTION SYSTEMS - See Section K.

MSDS STORAGE

Material Safety Data Sheets for all janitorial chemicals shall be provided by [Janitorial Supplier] . [Janitorial Supplier] shall full disclosure of ingredients on MSDS. [Janitorial Supplier] will provide training on materials on the hazards and proper use of janitorial chemicals for workers.

“Full Disclosure” for products which are not formulated with listed suspect carcinogens is defined as:

- Disclosure of all ingredients (both hazardous and non-hazardous) that make up 0.1% or more of the undiluted product and

- Use of concentration ranges for each of the disclosed ingredients. Suspect carcinogens are those which are listed on authoritative lists available for MSDS preparation: IARC, NTP and California Proposition 65 lists. Concentration ranges definitions are available from the Canada WHMIS regulation.

The intent of the full disclosure requirement is to have a facility disclosure policy that is responsive to the needs of health and safety personnel. If however, the full disclosure requirement is not met on the MSDS, then disclosure can be provided through other means that are easily accessible to health and safety personnel.

SPILLS

Preferable to address spills as soon as possible to minimize impact on both health and the environment. Work with building occupants to pick-up spills themselves or to communicate quickly so that the clearing personnel can quickly address the spill.

K. Use of Chemical Concentrates and Dilution Systems

PERFORMANCE METRICS AND MEASUREMENT

When available, chemical concentrates dispensed from closed dilution systems shall be used as alternatives to open dilution systems or non-concentrated products. Dilution systems and chemical concentrates shall be wholly utilized when applicable.

PRACTICES TO OPTIMIZE USE OF CHEMICAL CONCENTRATES AND DILUTION SYSTEMS

Chemical concentrates and dilution systems are used according to the procedures below to minimize risk to staff and occupants and to conserve resources.

USE OF CONCENTRATES FROM DISPENSING EQUIPMENT

Use of chemical concentrates has several positive environmental benefits:

- Significantly lower transportation costs and fuel use between manufacturer and end-user.
- Significantly lower use of packaging materials.
- Lower real chemical use to obtain same performance.
- Potentially lower exposure of maintenance personnel to hazardous chemicals.

Chemical concentrates may present higher hazards upon exposure. The proper containment, storage and dispensing of chemical concentrates is critical in avoiding employee exposures. Exposure to hazardous chemicals is minimized by using closed dispensing systems. Concentrates sold for manual dilution in buckets or bottles can actually increase the risk of employee exposure. Chemical concentrates dispensed from closed dilution systems shall be used preferentially to open dilution systems or non-concentrated products.

Janitorial cleaning personnel shall be properly trained in the use, maintenance and disposal of housekeeping chemicals, dispensing equipment and packaging.

Products should always be diluted accurately according to manufacturer's directions. This can be achieved through a variety of methods including measuring cups, simple dispensing pumps and automated dilution equipment. Dilution control equipment is highly recommended because it minimizes the potential for human error and reduces the chance of chemical exposure to concentrates. Dilution

equipment should be periodically checked for accuracy.

If using manual dilution, ex. measuring cup or pump, janitorial cleaning personnel should understand that by adding extra chemical concentrate beyond recommended dilutions that the product will not necessarily perform better. In fact, surfaces can become slippery and/or take on a cloudy or streaked appearance due to chemical residue.

Never mix cleaning products together. Some cleaning chemicals can react when mixed to give off dangerous by-products. Rinse containers after use.

Use appropriate personal protective equipment when mixing concentrated cleaning products.

Make sure that spray bottles (secondary containers) have appropriate labels.

L. Vulnerable Building Occupants

One of the primary goals of the Green Cleaning Policy and Program is to protect the health of building occupants. This is done in many ways including the identification and removal of harmful contaminants, such as particulates, mold spores, bacteria and viruses. And while the cleaning process can reduce exposure to these and other harmful contaminants, unfortunately, the process of cleaning and the cleaning products themselves can adversely affect the health of building occupants. This is especially true for those who are very sensitive to odors, those with pre-existing health conditions such as asthma and allergies, and those with reduced immune systems such as those recovering from cancer and other health conditions. Items to consider include:

- Identify those building occupants with individual needs and sensitivities.
- Develop a plan to address the individual needs of people with sensitivities.
- Modify procedures and/or cleaning schedules as necessary to accommodate their individual needs.
- Address ventilation requirements to help mitigate the problems with airflow.
- Communicate cleaning plans to building occupants.

For certain individuals, accommodations must be made relative to cleaning activities, noise levels, dust, etc. Some occupants may be very sensitive to the fragrances of cleaning products. Reported sensitivities may not even be caused by cleaning products but rather sensitivities to pet allergens brought into the building from co-worker's household pets. Understanding the sensitivities is essential for accommodating the occupants. In some cases, the time of day that cleaning takes place may need to be altered; in other cases, occupants who are reacting to their co-workers may need to be relocated to other areas within the building. In many situations these issues can't be resolved by the janitorial vendor, but requires everyone, including the affected individual, to work together to achieve the best outcome.

M. Staffing and Training

PERFORMANCE METRICS AND MEASUREMENT

All janitorial cleaning personnel shall receive regular training. [Janitorial Vendor] shall supply evidence of compliance with training requirements prior to contract award or renewal.

PRACTICES TO OPTIMIZE STAFFING AND TRAINING

All cleaning staff and managers shall receive environmental safety and health training, addressing, at a minimum, hazards associated with the use, disposal and recycling of cleaning chemicals, dispensing

equipment and packaging.

TRAINING

- Week 1: Classroom style one hour training with all the Janitors: microfiber training, chemical training, vacuum training and large equipment training.
- Week 2: One hour training on floors, common areas, restrooms and tenant spaces with janitors - individual attention paid to new chemicals, tools and equipment.
- Week 3: Check in with Supervisor, begin training on logs and tracking information as it relates to LEED.
- Week 4: Continue green cleaning training on individual basis, including day staff, night staff and any janitorial management personnel associated with the project.

STAFFING PLAN

To meet cleaning objectives within the building, minimum staffing requirements must be met. Factors such as occupancy rates, seasonal variations and other considerations should be taken into account when adjusting the staffing plan.

Under typical conditions, total cleaning staff time shall be not less than [X] hours per day. Generally, [X] staff members work [X] hours per day to meet these requirements.

N. Occupant Feedback and Evaluation of New Technologies

PERFORMANCE METRICS AND MEASUREMENT

All guests and occupants shall have a mechanism by which to provide feedback on cleaning practices.

PRACTICES TO OPTIMIZE OCCUPANT FEEDBACK AND EVALUATE NEW TECHNOLOGIES AND PROCEDURES

[Building Name] has implemented an electronic collection system for gathering occupants' feedback about the green cleaning program. Occupants are encouraged to alert the Property Management Team to any issues relating to the green cleaning program. In addition, management regularly researches and integrates new green cleaning technologies into the building's green cleaning procedures.

7. Recordkeeping Documents

All documentation relating to the tasks required by this Green Cleaning Policy will be kept on file for purposes of LEED EB: O&M (re)certification. All green cleaning products, materials, equipment and procedures will be tracked and recorded. The Property Management Team will coordinate with the Sustainability Coordinator to provide an annual Environmental Sustainability Report during the first quarter detailing the previous year's environmental achievements. Since LEED EB: O&M requires ongoing monitoring, it is important to include subcontractor specifications and reports, photographs and a written description of any findings concerning this policy.

8. References

- **GS-42:** Green Seal's Environmental Standard for Cleaning Services
www.greenseal.org/Portals/0/Documents/Standards/GS-42/gs42_one_pager.pdf

- **GS-37:** Green Seal’s Environmental Standard for General-Purpose, Bathroom, Glass and Carpet Cleaners Used for Industrial and Institutional Purposes
www.greenseal.org/Portals/0/Documents/Standards/GS-37/GS-37%20One-Pager.pdf
- **MCPS:** Sample plan by Montgomery County Public Schools, Maryland
www.montgomeryschoolsmd.org/departments/schoolplantops/PDF/MCPS%20Green%20Cleaning%20Plan.pdf
- **California Code of Regulations:** Title 17 Section 94509, VOC standards for cleaning products
www.calregs.com
- **LEEDuser:** General overview of the prerequisite with an open forum for comments and questions.
<http://www.leeduser.com/credit/EBOM-2009/IEQp3>