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Green Cleaning Policy for Old Dominion University

Effective date: September 1, 2022

Objective

Old Dominion University is committed to maintaining a high standard of cleanliness in our facilities as well as promoting indoor air quality and sustainability by implementing a thorough green cleaning program. We accomplish this level of commitment by incorporating sustainably certified chemicals and equipment and utilizing proper custodial training and procedures. We are committed to provide a healthy high-performance cleaning and a more productive indoor environment with fewer burdens to our natural resources.

The purpose of this document is to present the framework for Old Dominion University green cleaning standards and practices. The standards outlined here are intended to reduce the exposure of faculty, staff, students, and visitors to chemical, biological, and particulate matter that may be harmful to human health, and the built and natural environments.

Our overall cleaning standards are designed to fulfill LEED criteria. Other sources for our standards are Green Seal (GS) and The Association of Physical Administrators of Universities and Colleges (APPA). The green chemicals and tools selected under this standard are for routine cleaning. Where more aggressive cleaning of a non-routine nature is required, chemicals that do not meet this standard may occasionally be used. Examples of chemicals in this latter category are, floor finishes containing metal, strippers containing ammonia, red stain removers, metal polish, and ceramic tile cleaners. This approach complies with Green Seal GS37 and LEED 2009 EBOM IEQ Credit 3.3.

All the standards and guidelines set forth in the Green Cleaning Policy will be upheld by all management staff and custodial staff. This policy takes effect upon occupancy of the facility and will continue indefinitely.
SCOPE

This green cleaning policy applies to all building areas within Old Dominion University campus under the purview of Facilities Management & Construction, including functional spaces (offices, classrooms, etc.) as well as public restrooms, lounges, study rooms, public hallways, computer rooms, kitchenettes, stairwells, etc.

This policy is overseen by Old Dominion University Facilities Management & Construction and shall not be revised, changed, or updated without management consent.

GOALS

Program Goals

The goal of this green cleaning policy is to minimize exposure of building occupants and maintenance personnel to potentially hazardous chemical, biological and particle contaminants which may adversely impact air quality, health, building finishes and systems, and the environment, and to balance these needs with the cost and quality (i.e., product effectiveness of the managed systems to provide a sustainable approach to cleaning and janitorial maintenance.) In addition, it is the goal of Old Dominion University Facilities Management & Construction to gain “Green” certifications and LEED credits for sustainability and green cleaning via on-going inspections from third party organizations such as Green Seal, International Sanitary Supply Association (ISSA), and International Executive Housekeeping Association (IEHA).

Performance Goals

1. **Products**
   - Goal – Seek to purchase effective cleaning, hard floor and carpet care products that meet program sustainability criteria.
   - Metric – Purchases will be evaluated based on the portion of the product (measured by cost) which meet one or more of the sustainable criteria and its effectiveness according to product claims and application.
   - Performance – 80% of products by cost should meet these criteria. All products shall be effective in meeting product claims.

2. **Operating Procedure**
   - Goal – Maintain appropriate standard operating procedures, strategies, and guidelines for critical tasks.
   - Metric – Procedures will be evaluated based on quantitative audit and inspection results of building spaces as well as employee and customer feedback.
   - Performance – All procedures will meet LEED criteria.

3. **Staff Training**
   - Goal – Ensure appropriate staff training on an on-going basis.
   - Metric – Training will be evaluated based on time to train staff on new operating procedures and the results of quantitative building audits and inspections.
• Performance – All staff members will be fully versed on proper LEED safety requirements and procedures.

4. Occupant Feedback
• Goal – Collect feedback to ensure continuous improvement and occupant satisfaction.
• Metric – Occupant feedback will be based on the results of survey and suggestions.
• Performance – All occupants are pleased with the cleanliness of their buildings.

5. Budgetary considerations
• Goal – Meet budgetary considerations.
• Metric – Costs will be evaluated based on total money spent to enact changes.
• Performance – Enact green cleaning procedures and policy with as little expenditure as possible.

Roles and Responsibilities
Old Dominion University Facilities Management & Construction is responsible for developing and managing the implantation of the Green cleaning policy. The responsible party ensures that this policy is executed and that any contracted cleaning vendors under management’s control are aware of and are fully trained on the procedures outlined in this policy. Further, Old Dominion University Facilities Management & Construction is responsible for sharing this policy with the building tenant representatives and encouraging policy adoption accordingly. Old Dominion University Facilities Management & Construction is responsible for reviewing this policy for any significant changes on the interval specified in the quality assurance section. If at any time updates are required to this policy, the responsible party will ensure that the appropriate individuals are informed of the updates.

Staffing Models
A staffing model for each building along with detailed cleaning schedules (including entryways) and tasks will be maintained.

Staff Training
• All custodians are properly trained in the use, maintenance and disposal of cleaning products, dispensing equipment, and packaging. All custodians are trained on new equipment and chemicals prior to initial use. Custodians also receive training about PPE, the prevention of repetitive motion/stress injuries, and the proper way to move and lift objects.
• All custodians receive annual chemical safety training.
• All custodians are educated on the use of products upon their hire and once per year thereafter, as well as annual HAZCOM training. Or, as necessary, to ensure proper use and disposal of products.
• Training records of all staff are to be maintained by Facilities Management & Construction, or person designated by the Manager, and in the Physical Plant.
INSPECTIONS

A plan for conducting routine inspections to evaluate the effectiveness of the cleaning program, using the Association of Physical Plant Administrators (APPA) standards as a guide, is in place. The target standard is APPA level 3 (see description below). Managers and/or supervisors will conduct routine inspections and maintain records of inspection results and the corrective actions taken. A corrective plan is in place for any areas that fall below the target level of cleanliness. The plan includes the following:

Step One

Review the performance of the custodian to ensure that procedures are being followed as specified. This is accomplished by observing the custodian as each task is performed. The custodian is retrained in the correct procedures.

Step Two

If procedures are being followed correctly, a review of the process is required. This will include a look at the appropriateness of the cleaning tasks and tools, cleaning frequency and any changes in room usage. For example, if the usage of a room has changed from a private office to a staff break room, adjustments in the cleaning tasks and frequencies may be required.

Step Three

New cleaning schedules will be generated that reflect the new cleaning routines. The custodian will be retrained in the new procedures. The area will be inspected again within six months to assure quality levels are maintained.

APPA Levels of Cleaning

**Level 1 – Orderly Spotlessness**

- Floors and base moldings shine and/or are bright and clean; colors are fresh. There is no buildup in corners or along walls.
- All vertical and horizontal surfaces have a freshly cleaned or polished appearance and have no accumulation of dust, dirt, marks, streaks, smudges, or fingerprints. Lights all work and fixtures are clean.
- Washroom and shower fixtures and tile gleam, and are odor-free. Supplies are adequate.
- Trash containers and pencil sharpeners hold only daily waste, are clean and odor-free.

**Level 2 – Ordinary Tidiness**

- Floors and base moldings shine and/or are bright and clean. There is no buildup in corners or along walls, but there can be up to two days worth of dust, dirt, stains, or streaks.
• All vertical and horizontal surfaces are clean, but marks, dust, smudges, and fingerprints are noticeable upon close observation. Lights all work and fixtures are clean.

• Washroom and shower fixtures and tile gleam, and are odor-free. Supplies are adequate.

• Trash containers and pencil sharpeners hold only daily waste, are clean and odor-free.

**Level 3 – Casual Inattention**

• Floors are swept or vacuumed clean, but upon close observation there can be stains. A buildup of dirt and/or floor finish in corners and along walls can be seen.

• There are dull spots and/or matted carpet in walking lanes. There are streaks or splashes on base molding.

• All vertical and horizontal surfaces have obvious dust, dirt, marks, smudges, and fingerprints. Lamps all work and fixtures are clean.

• Trash containers and pencil sharpeners hold only daily waste, are clean and odor-free.

**Level 4 – Moderate Dinginess**

• Floors are swept or vacuumed clean, but are dull, dingy, and stained. There is an obvious buildup of dirt and/or floor finish in corners and along walls.

• There is a dull path and/or obviously matted carpet in the walking lanes. Base molding is dull and dingy with streaks or splashes.

• All vertical and horizontal surfaces have conspicuous dust, dirt, smudges, fingerprints, and marks.

• Lamp fixtures are dirty and some (up to 5 percent) lamps are burned out.

• Trash containers and pencil sharpeners have old trash and shavings. They are stained and marked.

• Trash containers smell sour.

**Level 5 – Unkempt Neglect**

• Floors and carpets are dull, dirty, dingy, scuffed, and/or matted. There is a conspicuous buildup of old dirt and/or floor finish in corners and along walls. Base molding is dirty, stained, and streaked. Gum, stains, dirt, dust balls, and trash are broadcast.

• All vertical and horizontal surfaces have major accumulations of dust, dirt, smudges, and fingerprints, all of which will be difficult to remove. Lack of attention is obvious.

• Light fixtures are dirty with dust balls and flies. Many lamps (more than 5 percent) are burned out.

• Trash containers and pencil sharpeners overflow. They are stained and marked. Trash containers smell sour.
Procedures and strategies for implementation

Old Dominion University Facilities Management & Construction follow cleaning procedures developed by Core Management Services LLC. This provides staffing needs, time to complete task, and inspections through their smart inspect system. Examples as follows:

General Cleaning

General Cleaning of all surfaces are performed a minimum of once a week. Restrooms and other public areas are cleaned daily.

1. Microfiber, lint-free dusting cloths are preferred instead of cotton cloths.
2. Always use a folded cloth. Spray cloth with cleaner. Be sure to refold when full of soil. Refolding provides more cleaning surface area and maximizes effective use of the cloth.
3. Use designated color cloths for different spaces, for example, for restrooms.
4. Soiled cloths are to be placed in a container to be laundered.

Dust Mopping

The dust mopping of floors and stairwells is performed a minimum of once a week.

1. A micro-fiber flat mop is preferred over a dry or chemically treated cotton mop.

Vacuuming

Vacuuming of floors is performed a minimum of twice a week.

1. CRI’s Green Label Program and HEPA filters are required for vacuums.
2. Vacuum bags should be checked periodically and changed out when they become half-full.

Entryway Maintenance

Entryway Maintenance is performed a minimum of once a week.

1. Sweep or vacuum entry and matting (daily).
2. Roll up and remove matting.

3. Place wet floor signs as the situation dictates.

4. Damp mop entryway. This reduces the potential for moisture to lead to bacterial and fungal growth when floor mats get wet.

5. Replace mats and remove wet floor signs when area is dry.

Floor Care

All floors are swept, dust mopped, wet mopped or auto scrubbed a minimum of once weekly.

Tile Floors

When wear paths begin to develop in the finish on tile floors, the floor is “top scrubbed” removing a layer of finish, dirt, and debris. The floor is then recoated using an uncertified floor finish. All tile floors are maintained with five coats of floor finish. Top scrubbing is a green preferred procedure that avoids the use of toxic strippers.

When floors cannot be restored using the top scrubbing method, a complete stripping of all wax finish is performed using a non-certified finish remover. A minimum of five coats of finish is then applied according to manufacturer specifications and application timelines.

Carpet Care

Carpets are deep cleaned once a year using sustainable powered carpet cleaning equipment. Our machines use less water, fewer chemicals and have advanced ergonomic features compared to non-certified equipment. Interim carpet cleaning is scheduled to address the needs of high traffic areas. Carpets are pre-sprayed before cleaning.

STANDARDS

Product -Specific Performance Requirements

• Each product shall clean common soils and surfaces in its category effectively, at the most dilute/least concentrated manufacturer-recommended dilution level for routine cleaning, as measured by the following applicable standard test methods. Products shall be diluted, as required, just prior to testing using water from the cold tap at no more than 50F. Carpet cleaners may be diluted with warm or hot water where required by the test method or performance considerations.

• General-Purpose Cleaners: The product shall remove at least 85% of the particulate soil.
• **Restroom Cleaners**: The product shall remove at least 80% of the soil in ASTM D5343-06 as measured by the method. If the product is used for toilet bowl or urinal cleaning, then it must also demonstrate efficacy for water hardness removal.

• **Carpet Cleaners**: The product shall have a pH between 3 and 10 and be tested following the requirements with an appropriate method as outlined in, alternative performance requirements, for cleaning efficiency and resoiling resistance.

• **Glass Cleaners**: The product shall achieve at least a rating of three in each of the following Consumer Specialty Products Association (CSPA) DCC 09 categories: soil removal, smearing, and streaking.

**Sustainable Product Standards**

Our cleaning chemicals meet one or more of the following standards listed below. Selected chemicals use dilution systems to minimize waste.

• General-purpose cleaners, bathroom, glass, and carpet cleaners comply with the Green Seal GS37 standard.

• Floor care products comply with the Green Seal GS-40 standard.

• Paper products and liners comply with the Green Seal GS-01 (toilet tissue paper) standard and GS -09 (paper towels & napkins) standard.

• Various disinfectants, metal polishers and degreasers comply with the Green Seal GS-40 standard and the Canadian Environmental Choice CCD-112, 113, 115, 147 standards.

• Hand soaps comply with the Green Seal GS-41 standard. **Powered Equipment Standards**

**Powered Equipment Standards**

All new equipment acquisitions for use at Old Dominion University’s campus under the purview of the Facilities Management & Construction shall comply with the requirements of LEED® 2009 for Existing Buildings: Operations and Maintenance TM IEQ Credit 3.4: Green Cleaning, Sustainable Cleaning Equipment. Under the following standards.

• Use only powered cleaning equipment that helps to reduce building contaminants and minimize any negative impact to the building and natural environment.
• Use only vacuum cleaners that have high filtration systems and/or HEPA systems. These systems have a positive impact on indoor air quality.

• Use only carpet extraction equipment, for restorative deep cleaning, which is certified by the Carpet and Rug Institute's (CRI) Seal of Approval Testing Program for deep-cleaning extractors.

• Use only powered floor maintenance equipment, including electric and battery powered floor buffers and burnishers, which are equipped with vacuums, guards and/or other devices for capturing fine particulates and which operate with a sound level of less than 70dBA.

• Use automated scrubbing machines equipped with variable-speed feed pumps and on-board chemical metering devices to optimize the use of cleaning fluids.

• Use battery-powered equipment equipped with environmentally preferable gel batteries.

• Use powered equipment ergonomically designed to minimize vibration, noise, and user fatigue.

• Use equipment designed with safeguards, such as rollers or rubber bumpers, to reduce potential damage to building surfaces.

CHEMICAL SAFETY PROCEDURES

• The following protocols have been established to mitigate spills, leaks, and mismanagement. All practices below are communicated to custodians working on the property in a formal training setting on a biannual basis.

LABELS AND SAFETY DATA SHEETS (SDS)

• Follow all chemical labels and SDS warnings and use products only as directed. Employees shall never use an unlabeled container.

• Employees shall never use any chemical product if uncertain what it is.

• Report to cognizant supervisor all missing or unreadable labels.

• A current SDS for all chemicals shall be maintained in each building in a readily accessible location.

• SDS for disused chemicals shall be maintained at Estes for a period of 30 years after the chemical was disused.

PERSONAL PROTECTIVE EQUIPMENT (PPE) AND SAFETY CONTROLS FOR STAFF

• Wear protective gloves and/or safety glasses as directed on the product label or MSDS.
• Inform your supervisor if PPE is needed.

• Always spray chemicals away from the body, especially eyes and mouth. Whenever possible, spray chemical into microfiber cloth.
• Do not eat or drink near any cleaning chemicals and always wash hands after using chemicals.
• Never smell, inhale, or taste the contents of a chemical container to determine its contents.

CLEANING WITH CHEMICALS AND CHEMICAL SAFETY

• Use only products provided by Environmental Services.

• Employees should only use products they have been trained to use.

• Report all chemical spills to a supervisor immediately and refer to instructions on SDS for proper spill cleanup and disposal.

• Employees should inform a supervisor if unable to get something clean with the chemicals provided.

• If product comes into contact with any body part, flush immediately with water. Remove any contaminated clothing. Follow first-aid instruction on the label or SDS.

• All chemical containers are to be securely covered and stored away from flames, heat, and the sun.

• Properly remove all cleaning chemical residue so customers and tenants will not be overexposed to chemicals.

• Wash hands after using chemicals.

• Do not bring products from home.

• Never puncture or collapse an aerosol can. Use only in accordance with label instructions.

MIXING CHEMICALS

• Never mix two different chemical products together: this may cause a dangerous reaction and/or poisonous gas.

• Only fill each secondary container bottle with the exact same product each time you refill.

• Dilute with water only where required.

• Make sure water is turned off and that no chemicals remain in mop buckets, dispensers, or machines.
• Make sure all caps are secure when returning chemicals to rack or closet. CHEMICAL STORAGE.

• Do not store chemicals above eye level.

• Do not store or consume food or drinks around chemicals (No food or beverages may be kept on housekeeping cart).

• All chemicals must be stored in a manner that limits opportunities for accidental spills, leaks and other mishaps.

CHEMICAL CONCENTRATES AND DILUTION SYSTEMS

• It is the intent of building management to have chemical concentrates used whenever possible to lower transportation costs between manufacturer and end-user, reduce use of packaging materials, reduce real chemical use to obtain same performance, and to lower exposure of maintenance personnel to hazardous chemicals.

• A portion controlled; closed dilution system is to be utilized in order to further reduce environmental impacts.

• Pre-labeled containers are to be utilized.

• Chemical concentrates shall be used with dilution systems to the maximum extent possible. Hillyard Arsenal chemical concentrates shall be used only with the Hillyard Arsenal chemical management system.

• Dilution systems and portion control devices shall never be tampered with or bypassed.

• Safe handling and storage of cleaning chemicals shall be evaluated by supervisory spot checks and inspections and monitored evolutions.

Protection of vulnerable occupants during cleaning

Vulnerable occupants include women who are pregnant, children, elderly occupants, and individuals with asthma, allergies, or other sensitivities.
As much as possible, only sustainable cleaning products will be used. Please refer to the goals and tracking sections of this policy for additional information.
Any cleaning that involves the use of carpet cleaners, or if at any point the use of a non-sustainable cleaning product is required, this cleaning will be blocked off and performed during regular business hours or during school closure.

Disinfectant and sanitizer selection and use
Only hand soaps and hand sanitizers that meet the at least one of the sustainability criteria listed under the purchasing guidelines will be considered to meet the requirements of this policy.

Hand sanitizers will be placed throughout the building for the use of occupants.

Only disinfectants meeting the purchasing sustainability criteria listed below will be considered to meet the requirements of this policy. Disinfectants will be kept locked in the janitorial closets and may only be used by the cleaning staff. Cleaning staff will be required to follow all dilution strategies for disinfectants.

As appropriate, all products are to be recycled.

**PERFORMANCE METRIC**

All newly acquired cleaning equipment shall comply with the sustainability criteria listed above. Facilities Management & Construction shall track the percentage of equipment utilized in the building that meets the criteria, based on cost or number of pieces of equipment, with a target of no less than 90% of the existing equipment meeting at least one of the sustainability criteria (other than the requirement for equipment safeguards).

In addition, Facilities Management & Construction will maintain an inventory of all powered cleaning equipment, including purchase date and all repair and maintenance activities. Vendor cut sheets for all equipment used on site will be made available on demand. When cleaning equipment replacement is necessary, acquisition dates and supporting documentation shall be retained to demonstrate that all newly acquired equipment complies with all appropriate sustainability specifications.

**Safe storage andagements of cleaning chemicals, including spill management**

- Cleaning chemicals will be stored in the janitor closets to prevent access for other occupants.

- Cleaning staff will receive training on the various hazards of different toxic chemicals and how to address spills.

- Spills will be cleaned and handled according to the manufacturer safety data sheets provided by the manufacturer.

- All spills will be handled carefully. As soon a spill of a non-sustainable product occurs, the responsible party must be notified. If the spill occurs in an area to which typical building occupants have access, the area will be blocked off and building occupants will be informed to stay clear of the area.
• Safety data sheets (SDS) for all of the cleaning chemicals used in the building will be retained and hazard information will be highlighted. This information will be clearly displayed in all janitor closets.

Strategies for conserving energy, water, and chemicals used for cleaning

• Manual-powered equipment and cleaning strategies will be used whenever possible to reduce the energy and water used by powered equipment and typical cleaning strategies.

• Cold water will be used for any necessary disposal to reduce energy used to heat hot water.

• The filters in vacuums and other applicable equipment will be changed frequently to enable air flow and reduce the energy consumption of the equipment.

• When cleaning chemicals are necessary, the operating procedures for chemical dilution will be done through the chemical stations located in the building, to ensure that the minimum amount of cleaning chemicals necessary is used.

Strategies for promoting hand hygiene

• All restrooms will be equipped with hands-free soap dispensers, faucets, hand dryers, and towel dispensers.

• Hand sanitizers meeting UL Eco Logo 2783 standard for Instant Hand Antiseptics (formerly Environmental Choice CCD 170) will be placed throughout the building.

Tracking plan for staffing and overall performance

• Regular APPA audits will be conducted to evaluate cleanliness. As a part of the audits, the auditors will interview cleaning staff to ensure that the cleaning and hard floor and carpet maintenance system is being consistently used.

• The audits will be conducted once every sixth months and will be led by the responsible party for this policy. The responsible party is responsible for recording the results of the audits in the management records, following up with any cleaning staff to provide additional training and/or guidance and recording these actions.

• All cleaning staff are required to check in each day when they arrive at work. The responsible party will retain these records to ensure that the building is sufficiently staffed with trained professionals.
• The responsible party will log all training that is provided to the cleaning staff and will ensure that the training plans described above are met.

• When new staff come on board, the responsible party will record the initial training provided to the staff.

Tracking plan for water, energy, and toxic chemical usage

• Every time a toxic chemical is used, it must be reported to the responsible party. The responsible party will record which chemical was used, where it was applied, and the reason for its use. This information will be used to track against the goal for using toxic chemicals only when strictly necessary.

• All vacuum filters will be replaced on a regular basis. The responsible party will record maintenance performed on all cleaning equipment, including filter replacement, to ensure that they are regularly replaced to reduce energy usage.

Tracking plan for cleaning product and cleaning equipment purchases

• All cleaning product and cleaning equipment purchases, made by either by the cleaning vendor for use in the building or made by the building management, will be recorded in the purchasing log.

• On a quarterly basis, the responsible party will review all purchases and compare against the policy goals. If the policy goals are not being met, the responsible party will take corrective action, typically in the form of providing education to the individuals in charge of procurement on the goals and sustainability criteria outlined in this policy.

Staffing and contingency plans

• To sufficiently clean the buildings common areas and classrooms, it requires at least one hour of cleaning per day for each 5,000 square feet. As the buildings common areas are 4,812,285 square feet, it requires a minimum 962 hours of cleaning time per day. The cleaning staff typically works 6 hours per day; therefore, a cleaning staff of at least 160 people daily. Typically, 160 to 180 people are maintained on the cleaning staff.

• In the event of staffing shortages (only 3 staff are available from the regular vendor), the building maintains a contact with a backup cleaning vendor who can supply additional staff.
• Occupant and custodial staff feedback will be taken into account in the cleaning procedures described in this policy. The responsible party will evaluate whether updates to the staffing plan and contingency plan are necessary based on the feedback.

Staff training plan

• All cleaning staff, including backup personnel, are required to receive at least 8 hours of training per year. The responsible party will record the training attended by each staff member.

• Trainings are held once a month and are one hour long. Topics vary each month, and cover standard operating procedures for cleaning different surfaces, proper toxic chemical usage and spill management, hazards of toxic chemicals, cleaning to protect vulnerable occupants, cleaning equipment maintenance, and conservation of energy and water usage during cleaning.

• The responsible party coordinates and hosts all of the trainings.

Quantitative testing for cleanliness of surfaces

Visual Examination

For cleanliness qualification of building surfaces for noncritical applications, ODU requires a direct visual examination for Surface Contamination and Cleaning of the surface for qualitative assessment of the level of cleanliness. Visible cleanliness levels defined for surfaces are generally clean (GC), visibly clean.

These inspections are done through the Smart Inspect App which provides detail list which provide a Pass/Fail result.

Purchasing guidelines

Criteria for Cleaning Products and Materials

Cleaning products must meet one or more of the following standards

• Green Seal GS-37, for general-purpose, bathroom, glass and carpet cleaners used for industrial and institutional purposes.

• UL Eco Logo 2792 (formerly CCD 110), for cleaning and degreasing compounds.

• UL Eco Logo 2759 (formerly CCD 146), for hard surface cleaners.
• UL Eco Logo 2795 (formerly CCD 148), for carpet and upholstery care.

• Green Seal GS-40, for industrial and institutional floor care products.

• UL Eco Logo 2777 (formerly CCD 147), 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 Safer Choice Standard requirements, as appropriate for use patterns and marketing claims).

Disinfectants, metal polish, or other products not addressed by the above standards must meet one or more of the following standards.

• UL Eco Logo 2798 (formerly CCD 112), for digestion additives for cleaning and odor control.

• UL Eco Logo 2791 (formerly CCD 113), for drain or grease trap additives.

• UL Eco Logo 2796 (formerly CCD 115/107), 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

Disposable janitorial paper products and trash bags must meet the minimum requirements of one or more of the following programs.

• EPA comprehensive procurement guidelines, for janitorial paper.

• Green Seal GS-01, for tissue paper, paper towels and napkins.

• UL Eco Logo 175 Sanitary Paper Products, for toilet tissue and 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 and hand sanitizers must meet one or more of the following standards.

- 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 Eco Logo 2784 (formerly CCD 104), for hand cleaners and hand soaps.

- UL Eco Logo 2783 (formerly CCD 170), for hand sanitizers.

- EPA Safer Choice Standard.

**Purchasing Criteria for Cleaning Equipment**

All powered equipment must have the following features:

- safeguards, such as rollers or rubber bumpers, to avoid damage to building surfaces

- ergonomic design to minimize vibration, noise, and user fatigue, as reported in the user manual in accordance with ISO 5349-1 for arm vibrations, ISO 2631–1 for vibration to the whole body, and ISO 11201 for sound pressure at operator’s ear

- as applicable, environmentally preferable batteries (e.g., gel, absorbent glass mat, lithium-ion) except in applications requiring deep discharge and heavy loads where performance or battery life is reduced by the use of sealed batteries.

Vacuum cleaners must be certified by the Carpet and Rug Institute Seal of Approval/Green Label Vacuum Program and operate with a maximum sound level of 70 dBA or less in accordance with ISO 11201.

Carpet extraction equipment, for restorative deep cleaning, must be certified by the Carpet and Rug Institute's Seal of Approval Deep Cleaning Extractors and Seal of Approval Deep Cleaning Systems program.

Powered floor maintenance equipment must be equipped with such as vacuums, guards, or other devices for capturing fine particulates and must operate with a maximum sound level of 70 dBA, in accordance with ISO 11201.
Propane-powered floor equipment must have high-efficiency, low-emissions engines with catalytic converters and mufflers that meet the California Air Resources Board or EPA standards for the specific engine size and operate with a sound level of 90 dBA or less, in accordance with ISO 11201.

Automated scrubbing machines must be equipped with variable-speed feed pumps and either (1) on-board chemical metering to optimize the use of cleaning fluids or (2) dilution control systems for chemical refilling. Alternatively, scrubbing machines may use tap water only, with no added cleaning products.

**Quality Assurance/Quality Control Processes**

The responsible party will evaluate the green cleaning policy on a quarterly basis to evaluate progress towards the implementation goals. If any cleaning product or equipment purchases are not being recorded properly, the responsible party will inform the appropriate individuals to ensure that activities are recorded moving forward. The responsible party will evaluate the results of the cleaning audits to determine whether the building is being sufficiently cleaned and whether the standard cleaning procedures are being properly executed. As necessary, the responsible party will revise the green cleaning policy to include additional cleaning strategies or modify existing cleaning strategies.

In addition, if any implementation goals are not being met, the responsible party will investigate the situation and will work with the individuals purchasing the materials and equipment or using the equipment. The responsible party will evaluate whether updates are necessary to the in order to achieve the implementation goals.

Any revisions that are made to the policy will be incorporated into the next training cycle for the cleaning staff.