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**Rice University Moody Center for the Arts**

**Green Cleaning Policy and Program Plan**

**LEED for Existing Buildings: Operations and Maintenance**

**January 5, 2017**

**SECTION 1: SCOPE**

This Policy and Plan addresses environmental best practices for cleaning the interior of the Moody Center for the Arts at Rice University. Specifically, it 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. The purpose of the policy is to enhance the safety of the building for the cleaning staff, the patrons, and the environment. As an affirmation of these goals, the mission of the custodial department at Rice University is to “Provide our faculty, staff, students and visitors with a healthy, clean and safe environment”.

This building is located at 6100 Main Street on the campus of Rice University.

**SECTION 2: GOALS**

The goal of this Green Cleaning Policy and Plan is to reduce the exposure of building occupants and maintenance personnel to potentially hazardous chemical, biological and particle contaminants, which adversely impact air quality, health, building finishes, building systems and the environment.

**SECTION 3: RESPONSIBLE PARTIES**

Rice University directly employs, rather than subcontracts, its custodians, including the staff to maintain the Moody Center for the Arts.

Mr. Eusebio Franco, Director of Custodial and Grounds, is responsible for developing and managing the implementation of the Green Cleaning Policy and Plan.

Personnel involved with various elements of the green cleaning program shall carry out their tasks according to this policy, and report all relevant activities to the aforementioned parties. To ensure an effective and coordinated effort, the building staff responsible for overseeing the Green Cleaning Policy and Plan shall review all proposed cleaning activities before implementation.

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| --- | --- | --- |
| Function | Primary Contact | Phone |
| Janitorial / Cleaning services | Bobby Davis | 713-348-2518 |

**SECTION 4: QUALITY ASSURANCE CONTROL PROCESS**

The party(ies) responsible shall periodically evaluate the success of the Green Cleaning Policy and Plan. This evaluation may include producing and providing a report on an annual basis to senior management. Whenever possible, the annual report shall include an evaluation of the performance, safety, cost and environmental/public health benefits achieved as a result of its implementation.

Prior to implementation, the responsible party(ies) shall review all proposed cleaning activities. Upon reviewing proposed activities, the responsible party(ies) shall determine if they meet the criteria of the Green Cleaning Policy and approve or deny action.

The responsible party(ies) shall regularly communicate with all cleaning staff, and conduct regular site inspections and evaluations to ensure that the Green Cleaning Policy and Plan is in place and functioning as intended. In addition to ongoing quality control measures, Mr. Eusebio Franco will review all practices and products (typically annually) to identify opportunities for improvement and expansion of environmentally friendly practices.

**SECTION 5: CLEANING PRODUCTS**

PERFORMANCE METRICS AND MEASUREMENT

The practices listed below shall be implemented, to the extent practicable, with a target goal of 30% of products complying, based on cost. The Responsible Party shall assign staff to track purchase rates of both compliant and noncompliant products and seek to optimize the use of sustainable cleaning products.

PRACTICES TO OPTIMIZE USE OF SUSTAINABLE CLEANING PRODUCTS

Cleaning products and materials, including hard-floor and carpet-care products, used at the Moody Center for the Arts 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 cleaner use for industrial and institutional purposes
  + Environmental Choice CCD-110, for cleaning and degreasing compounds
  + Environmental Choice CCD-146, for hard-surface cleaners
  + Environmental Choice CCD-148, for carpet and upholstery care.
* 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:
  + Green Seal GS-40, for industrial and institutional floor-care products
  + Environmental Choice CCD-112, for digestion additives for cleaning and odor control
  + Environmental Choice CCD-113, for drain or grease-trap additives
  + Environmental Choice CCD-115, for odor-control additives
  + Environmental Choice CCD-147, for hard-floor care
  + California Code of Regulations maximum allowable VOC levels for the specific product category.
* Disposable janitorial paper products and trash bags meet the minimum requirements of one or more of the following programs for the applicable product category:
  + U.S. EPA Comprehensive Procurement Guidelines for Janitorial Paper and Plastic Trash Can Liners
  + Green Seal GS-09, for paper towels and napkins
  + Green Seal GS-01, for tissue paper
  + Environmental Choice CCD-082, for toilet tissue
  + Environmental Choice CCD-086, for hand towels
  + Janitorial paper products derived from rapidly renewable resources or made from tree-free fibers.
* 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 (i.e., food service and health care requirements)
  + Green Seal GS-41, for industrial and institutional hand cleaners
  + Environmental Choice CCD-104, for hand cleaners and hand soaps.

APPROVED PRODUCT LIST

The products listed below are approved for use. Products beyond those listed here must be submitted for approval prior to use. The Moody Center staff shall continue stocking the following Green Seal-compliant products:

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| **Product Type** | **Manufacturer/Product Name** | **Sustainability Criteria Met** |
| Multi-purpose Cleaner | Spartan Peroxy All Purpose Cleaner | Green Seal GS-37 |
| Roll Tissue | SCA Tissue Tork roll tissue #TJ0922A | EcoLogo Certified |
| Roll towel | SCA Tissue Tork roll towel #290088: | EPA Compliant with a minimum of 40% post-consumer waste, EcoLogo and Green Seal Certified |
|  |  |  |

**SECTION 6: CLEANING EQUIPMENT**

Microfiber cloths and mops will be used for hand cleaning. The cloths and mop heads usually last for 6-12 months, and they will be machine washed after use using Spartan Clothesline Fresh Laundry Detergent. This detergent contains biodegradable surfactants that are on Design for the Environment’s CleanGredients list, and the detergent is phosphate-, EDTA-, and nonylphenol ethoxylate-free (see **Attachment 3**).

For machine cleaning, the following equipment will be used:

* U.S. Products King Cobra carpet extractor: uses only water after pre-treating with Spartan Peroxy All Purpose Cleaner, earned the Carpet and Rug Institute Seal of Approval
* Mondo Vap vapor cleaning machine: used for once steam weekly cleaning using disinfecting 240°F water without detergent
* Duplex 420 floor scrubber: cleans both hard floors and carpet using only water
* Nobles ec-H20 Scrubber: uses water with a small electrical charge (see **Attachment 4**)
* Vacuum cleaners: all are equipped with HEPA filters

PERFORMANCE METRICS AND MEASUREMENT

All newly acquired cleaning equipment shall comply with the criteria listed below. The Responsible Party shall assign staff to include provisions to identify all powered cleaning equipment currently utilized by staff, according to the criteria listed below, and to track the percentage of all equipment currently utilized by that meets the criteria, based on cost or number of pieces of equipment, with a target of 20% of equipment to comply by one year following this policy taking effect.

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 70dBA.
* 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—e.g., 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 70dBA.
* Propane-powered floor equipment has high-efficiency, low-emission engines with catalytic converters 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 90dBA.
* 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**

A log shall be kept 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 onsite. 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.

APPROVED EQUIPMENT LIST

The equipment listed below is approved in the event of new equipment acquisition. Equipment beyond that listed here must be submitted for approval prior to acquisition.

The staff of the Moody Center for the Arts will be responsible for completing an inventory of owned approved powered cleaning equipment using a template example below following this policy taking effect. Conversely, custodial personnel do not consistently utilize any such equipment listed under aforementioned criteria.

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| **Equipment Type** | **Manufacturer/Model** | **Sustainability Criteria Met** |
| Pro Team Quiet Pro  Carpet Extractor | Quiet Pro – HEPA  Nilsfisk Advance Aqua Clean | HEPA / Bronze Certified  The Carpet and Rug institute Seal of Approval |

**SECTION 7: 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

* The floor and carpet maintenance program at the Moody Center for the Arts is designed to use few, or no, harmful chemicals; remove and eliminate irritating dust, dirt and other contaminants; and protect and preserve floors.
* To minimize chemical use, the Moody Center for the Arts has reduced the frequency of stripping or removing coatings to once a year and is able to maximize the floor’s longevity, thereby conserving cleaning and floor restoration materials and minimizing occupants’ exposure to harmful chemicals.
* A written floor maintenance plan and log shall be maintained, which details the number of coats of floor finish being applied as the base and other applications (top coat), along with all relevant maintenance/restoration practices and the dates and duration of these activities.

**SECTION 8: ENTRYWAY SYSTEMS**

PERFORMANCE METRICS AND MEASUREMENT

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

All entryways and entrances into the Moody Center for the Arts are equipped with walk-off mats:

* The walk-off mats shall be professionally cleaned on a weekly basis and thoroughly vacuumed onsite on a daily basis. The flooring beneath the mats shall be vacuumed and mopped on a weekly basis as well.
* Secondary entrances shall also have walk-off mats of 10–12 feet in length to capture initial loose particles entering the building. These mats must be vacuumed weekly, and the floor beneath shall be vacuumed and mopped on a weekly basis.
* Pieces of dirt, debris, or cobweb that a vacuum cleaner may be unable to readily pick-up will be manually swept and removed.

**SECTION 9: 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

* All restroom facilities, including those in guest rooms, public areas and back-of-house spaces shall include appropriate hand soaps. (See Section 5.)
* Per regulations, hand-hygiene reminder notices will be communicated to contracted vendor operating food-preparation areas.

**SECTION 10: 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.

**Storage**

* Only minimum amount of chemicals will be stored on-site for incidental use by Moody Center for the Arts staff.
* Cleaning chemicals are stored in a single-locked janitorial closet on the ground floor. Workers access chemicals at the beginning of their shift and as needed.

**Chemical Dilution systems**

(See Section 11)

**MSDS Storage**

* The cleaning chemical supplier is required to provide accurate MSDSs for all chemicals delivered to the building.
* MSDSs are filed, in duplicate, in the chemical storage room and the manager’s office in clearly labeled binders.
* The cleaning chemical supplier maintains a toll-free hotline that can be called in the event of spills or accidents to access safety data and protocols.

**Emergency Procedures**

* The contracted cleaning crew vendor will be responsible for isolating and rectifying all spills of bulk chemical cleaning materials used.
* Affected area will be effectively closed to foot traffic for the duration of the clean-up and subsequent check for air quality.
* Circumstances of the spill, risk of exposure for similar future events, and scope of clean-up efforts will be documented and investigated for root cause analysis.

**SECTION 11: USE OF CHEMICAL CONCENTRATES AND DILUTION SYSTEMS**

PERFORMANCE METRICS AND MEASUREMENT

Dilution systems and chemical concentrates shall be wholly utilized for the following product types:

Use of heavily concentrated cleaning chemicals requiring dilution will be highly discouraged as posing an unreasonably high risk for exposure to cleaning crew personnel and building occupants.

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.

**Dilution System Description**

Manual dilution will be prohibited on-campus as proficiency of contracted cleaning crew members actually performing the task will be impossible to consistently and independently verify and confirm; posing a hazard with low available controls.

**Protocol for Use**

All cleaning chemicals used must come ready to use and not necessitate any pre-maintenance mixing, diluting, or similar preparations; restriction is necessary to prevent accidental mixing of incompatible materials with hazardous results (i.e. mixing bleach and ammonia-containing products).

**Maintenance**

Maintenance of the storage area (general upkeep) for cleaning chemicals will be performed in-house by members of the Rice University Facilities Engineering and Planning’s Custodial Department. Special attention will be paid to how contracted cleaning crew personnel keep chemical containers on-site and if there are any elevated risks for spills or leaks while in storage.

**SECTION 12: CONTAINMENT AND TREATMENT OF LABORATORY CHEMICALS**

PERFORMANCE METRICS AND MEASUREMENT

For any drain that handles laboratory-type liquids, containment drains must be provided that will appropriately treat the liquid waste.

PRACTICES TO OPTIMIZE USE OF CONTAINMENT DRAINS IN LABORATORY SPACES

Containment drains are installed and used, as necessary, according to the procedures below, to minimize risk to staff and occupants, and to mitigate contamination of natural resources.

**Containment Drain Description**

Laboratory sinks are used to drain non-hazardous solutions following regular classroom bench-top chemistry. Sinks are equipped with filter-fitted P-traps to capture non-soluble effluent. Individual containment units are utilized for precautionary measures by the hazardous waste satellite accumulation stations.

**Protocol for Use**

No hazardous liquid materials are permitted for drainage into sanitary sewers connected to the laboratory sinks. All hazardous liquid waste is accumulated on-site for disposal by the third party hauler. Any hazardous waste spills are to be immediately isolated and held back by barriers until the clean-up in complete. The Rice University Environmental Health and Safety Department will oversee all hazardous material spills, remediation effort and subsequent proper disposal.

**Maintenance**

Rice University Facilities Engineering and Planning personnel shall perform regular maintenance of laboratory sinks and installed P-traps to prevent hazardous effluent from entering the sanitary sewer drains. Contracted hazardous waste hauler TSM Recovery shall be responsible for pick-up and disposal of all hazardous waste generated on-site.

**SECTION 13: VULNERABLE BUILDING OCCUPANTS**

To protect vulnerable building occupants, such as pregnant women, children, asthmatics, elderly occupants, individuals with allergies and highly sensitive individuals, the cleaning staff shall use only low/no VOC cleaning products; they shall perform routine cleaning and floor restoration activities after working hours when the majority of occupants have left the building; the staff shall limit the number of cleaning chemicals used in the building; and they shall maintain a high level of cleanliness thus minimizing the presence of irritants.

**SECTION 14: STAFFING AND TRAINING**

PERFORMANCE METRICS AND MEASUREMENT

All cleaning personnel shall receive regular training. Rice University requires that all of its custodians pass a 2-3 week training course in Rice’s Cleanology Program which details the products and procedures used for green cleaning at Rice. The introduction to the training manual states that “every procedure is based on Rice’s Green Program, designed to decrease air pollution, ozone depletion, and global climate change.” This statement, in conjunction with the cleaning products and procedures detailed in the manual, exemplifies Rice University’s commitment to sustainability and environmental responsibility at the Moody Center for the Arts at Rice University. **See Attachment 1**

PRACTICES TO OPTIMIZE STAFFING AND TRAINING

All cleaning staff and managers shall receive environmental safety and health training, addressing, at minimum, hazards associated with the use, disposal and recycling of cleaning chemicals, dispensing equipment and packaging. **See Above and Attachment 1.**

**Training Topics**

The Rice University Facilities Engineering and Planning Custodial Department will be responsible for providing all relevant health and safety training to the contracted cleaning crew personnel performing janitorial duties on-site. Relevant health and safety training may comprise of the following components:

* Employee safety and health compliance as it relates to the cleaning program
* Regulatory compliance standards—OSHA, EPA, and other local, state, and federal rules and regulations
* Unsafe attitudes and conditions in the work place through Job Safety Analysis
* Employee performance improvement, such as accident prevention and record-keeping
* Compliance with health and safety rules, and regulation and confidentiality issues
* Safe chemical storage and handling
* Disposal and recycling of cleaning chemicals, dispensing equipment and packaging

**Annual Training Hours**

Rice prefers to have the majority of the cleaning staff work during daytime hours in order to save energy, better facilitate communication between the custodians and the customers, and offer its custodians more convenient hours. All custodial staff, including those who will be staffed in the Moody Center for the Arts, are required to complete the Cleanology training program (see **Attachment 1**). During the training, the new hires are familiarized with other staff members, supervisors, and individuals in other related departments, such as plumbing. The training course also has several rounds of testing. Within two years of completing the Cleanology training, all staff members are required to become a certified Cleanologist, a process involving 9 months of biweekly classes with a final exam. After certification, staff members have the option to pursue additional training to become a Registered Cleanologist, who can serve as a team leader or instructor. Additionally, all staff members are required to participate in “customizing” 3 times per quarter, when they speak directly to their customers, such as office occupants, and ask if there are ways to improve their service. Once per quarter, each staff member’s performance is assessed by a certified Cleanologist and a Registered Cleanologist.

**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.

**SECTION 15: OCCUPANT FEEDBACK AND EVALUATION OF NEW TECHNOLOGIES**

PERFORMANCE METRICS AND MEASUREMENT

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

PRACTICES TO OPTIMIZE OCCUPANT FEEDBACK AND EVALUATE NEW TECHNOLOGIES AND PROCEDURES

The Moody Center for the Arts at Rice University has implemented an electronic collection system for gathering occupants’ feedback about the green cleaning program. Occupants are encouraged to alert the management 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.

**SECTION 16: TIME PERIOD**

This policy shall take effect with the opening of the Moody Center for the Arts and continue indefinitely. If policy or contract is revised, then the policy would be revised to the same date as revised contract. All provisions reflecting above requirements to be signed off on an updated policy and policy shall continue indefinitely or until amended and/or replaced by a subsequent green cleaning policy.

Attached documents:

1. Draft of the Cleanology Program manual

2. Spartan Peroxy Green Seal Certificate.

3. Material Safety Data Sheet for Clothesline Fresh Laundry Detergent.

4. Description of Nobles ec-H20 Scrubber.