

Green Cleaning Practices at Ohio University

Introduction

The strategies outlined in the Green Cleaning Practices will assist Ohio University Facilities Management in their efforts to provide services that are valued, effective and efficient while allowing the department to serve as responsible stewards of the university's resources (in accordance with the VPF&A Mission Statement). While maintaining a clean, healthy and sustainable living, learning and working environment is reliant on the practices of Ohio University custodial staff, it is also essential that building occupants do their part to maintain a safe space. Additional efforts put forth during the construction of new buildings will allow for building occupants to appropriately interact with their built environments in order to contribute to the Green Cleaning Practices as established here.

Purpose

The Green Cleaning Practices were established to protect university employees and building inhabitants from potentially hazardous chemical contaminants that can be found in common cleaning products. By reducing the campus community's exposure to such chemicals, the university hopes to improve indoor air quality and occupant well-being. Additionally, limiting the use of dangerous chemicals can offer environmental benefits in the extraction, production and packaging of university cleaning products,

Goals and Strategies

"Green Cleaning" standards are established here to minimize environmental impacts of building operations and assist the university in maintaining LEED Silver status of all new construction and major renovations on all of its campuses. Ohio University Facilities Management continually aims to improve its environmental performance by complying with the following institutional standards.

- Purchase sustainable cleaning, hard floor and carpet care products that meet the sustainability requirements outlined in LEED 2009 IEQ Credit 3.3 – with an allowance for an alternate compliance path with the purchase of EnviroX bio-based cleaning products.
- Purchase of cleaning equipment meeting the sustainability criteria outlined in LEED 2009 IEQ Credit 3.4.
- Ensuring that all custodial staff is aware of their responsibilities in implementing this environmental policy: Provide consistent practices for the utilization, management and audited use of cleaning practices for hard floor and carpet maintenance. These practices will be highly defined and training will be provided to staff to allow for consistent practices throughout the institution. This procedure is being put into place to effectively utilize staff time, protect building occupants and ensure the longevity of cleaning equipment.
- All Ohio University custodial staff will be trained on and encouraged to utilize improved hand hygiene practices when on duty.
- All Ohio University staff will be required to comply with safe handling guidelines for hazardous materials. These guidelines have been established by OU Environmental Health and Safety and all new staff are trained on the proper handling of such materials to ensure the safety of OU staff and building occupants while conserving such resources.
- All maintenance staff that are to be assigned to specific areas of campus must undergo training regarding the hazards associated with chemical use and disposal. They must also receive information regarding the proper recycling, cleaning, dispensing and packaging of these items.
- All new construction and renovations must include Facilities Management in a minimum of 2 planning meetings to ensure "Green Cleaning" compliance prior to project completion.
- Facilities Management encourages occupant feedback regarding these guidelines through their website at www.ohio.edu/facilities. Specifically, the language shall encourage feedback by stating, "We strongly encourage our customers to use the online work request (link) to provide services that are tailored to your needs and requirements. If you have any questions or feedback, please contact Shari Smith, 740-593-2911 or smiths15@ohio.edu."

As such, Facilities Management Custodial Services at Ohio University is committed to:

- Educating, training, and motivating custodial staff to work in an environmentally responsible manner.
- Ensuring that all custodial staff is aware of their responsibilities in implementing this environmental policy.
- Conserving energy, water, and other resources while still providing a cleaned and sanitary environment.
- Complying with all relevant current legislation and industry standards.
- Using cleaning products that meet Green Seal standard GS-37 or products with low-volatile organic compounds (VOC) whenever applicable.
- Using products that meet EPA standards with high post-consumer recycled content.
- Using equipment with good filtration.
- Eliminating phosphates and aerosol products.
- Using concentrated cleaning products when available.
- Using chemicals that are automatically and accurately diluted using cold water.
- Using products that are packed with recycled materials.
- Utilizing customer feedback to establish a priority listing of products to receive preference giving consideration to building occupant comfort and building longevity.

*Note: Some of the above language was taken from University of Washington's Green Cleaning Policy:
<http://www.washington.edu/facilities/building/custodial/files/documents/GreenPolicy.pdf>*

LEED Credit Narrative for GREEN CLEANING at Ohio University

ID 1.1 Green Cleaning Products & Materials (LEED-EBOM 2009 IEQ Credit 3.3)

Intent

To reduce the environmental impacts of cleaning products, disposable janitorial paper products and trash bags.

Fulfill requirements of LEED-EBOM Green Cleaning Pre-requisite-Materials posted.

Requirements (identical to stated credit above)

Implement sustainable purchasing for cleaning materials and products, disposable janitor paper products and trash bags. Cleaning product and material purchases include items used by in-house staff or outsourced service providers. One point is awarded if 30% of the total annual purchases of these products (by cost) meet at least one of the following sustainability criteria.

- **The cleaning products meet the Green Seal Standard GS-37 for general purpose, bathroom, glass and carpet cleaners used for industrial and institutional purposes.**
 - Purchase of sustainable cleaning and hard floor and carpet care products contain bio-based materials. (example: EnvirOx 117m 62.2% bio-based materials). See documentation on pages 5-7
- **Disinfectants, metal polishes, floor finishes, strippers or other products not addressed above meet the Green Seal Standard GS-40 for appropriate category.**
 - Ohio University elects to meet this requirement through the Alternative Compliance Path: The University uses EnvirOx 117 and 118 sanitizers as disinfectants. These care cleaning products that meet a minimum standard of 57% bio-based materials. See documentation on pages 5-7
- **Disposable janitorial paper products and trash bags meet the minimum requirements of:**
 - **EPA Guidelines for Janitorial Paper and Plastic Trash Can Liners**
 - Colonial can liners are EPA compliant.
 - <http://www.colonialbag.com/pdfs/catalog.pdf>
 - <http://www.colonialbag.com/GreenEPA.pdf>
 - **Green Seal GS-09 for paper towels and napkins**
 - Use Von Drele Paper Towels and Napkins (Preserve White Hardwound), GS-09.
 - **Green Seal GS-01 for tissue paper**
 - Use Von Drele tissue paper (preserve Jumbo 1 Ply), GS-09
- **Hand Soaps meet the Green Seal Standard GS-41 for industrial and institutional hand cleaners**
 - Use Kutol hand soap (EZ Foam Foaming Luxury Hand Soap), GS-41.
 - All other soaps used (industrial, institutional, etc.) meet GS-41 standards.

Strategy and Documentation:

- A. Establish a formal Green Cleaning Practices
 - a. See page one of this document
- B. Identify priorities for sustainable or environmentally preferable emphasis
 - a. Identified in final section of Green Cleaning Practices
- C. Engage cleaning services that can comply with desire for green cleaning
 - a. Identified in final section of Green Cleaning Practices

ID 1.2 Green Cleaning-Sustainable Cleaning Equipment (LEED-EBOM 2009 IEQ Credit 3.4)

Intent

To reduce the exposure of building occupants and maintenance personnel to potentially hazardous chemical, biological and particulate contaminants that adversely affect air quality, human health, building systems and the environment from powered cleaning equipment.

Requirements (identical to state credit above)

Implement a program for the use of janitorial equipment that reduces building contaminants and minimizes environmental impact. The cleaning equipment program must require the following:

- **Vacuum cleaners are certified by the Carpet and Rug Institute “Green Label” Testing Program for vacuum cleaners and operate with a sound level of less than 70 dBA**
 - ProTeam Super Coach, Gold Level certified. See documentation on page 8.
 - Hoover Conquest, CRI certified Bronze. See documentation on page 9.
- **Carpet extraction equipment used for restorative deep cleaning is certified by the CRI “Seal of Approval” Testing Program for deep-cleaning extractors**
 - Windsor Industry, Commodore 20. Platinum level certified. See documentation on page 10.
- **Powered floor maintenance equipment, including 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 of less than 70 dBA.**
 - Not applicable. No powered floor maintenance equipment will be used in this building.
- **Propane-powered floor equipment has high efficiency, low emissions engines with catalytic converters and mufflers that meet CARB or EPA standards for the specific engine size and operate with a sound level of less than 90 dBA.**
 - No such equipment is scheduled to be used in this building. If, for any reason, such equipment becomes necessary, we will use the Pioneer Eclipse burnisher – which complies with these standards. See page 11 for documentation.
- **Automated scrubbing machines are equipped with variable-speed feed pumps and on-board chemical metering to optimize the use of cleaning fluids. Alternatively, the scrubbing machines use only tap water with no added cleaning products.**
 - Not applicable for this building.
- **Battery-powered equipment is equipped with environmentally preferable gel batteries**
 - Not applicable for this building.
- **Powered equipment is ergonomically designated to minimize vibration, noise and user fatigue.**
 - Not applicable for this building.
- **Equipment is designed with safeguards, such as rollers or rubber bumpers, to reduce potential damage to building surfaces.**
 - All powered equipment purchased by Ohio University Facilities Management is fully equipped with rubber bumpers to prevent damage to building surfaces. Please see documentation through photos provided on pages 9-11.

Keep a log for all powered cleaning equipment to document the date of equipment purchase and all repair and maintenance activities and include vendor specification sheets for each type of equipment in use.

All purchases and repairs are documented in the Work Order System, “The Maintenance Answer” (TMA) and is tracked clearly in an inventory sheet.



EnviroX GNx2 products meet the requirements for credits towards
LEED-EB Certification!

Our Mission

We will be the BEST at providing environmentally preferable products that effectively meet people's needs where they live, learn, work & play.

The USGBC (United States Green Building Council) is a non-profit organization committed to expanding sustainable buildings practices. They are working to advance structures that are environmentally responsible, profitable and healthy places to work. One of the USGBC initiatives is the LEED-EB: O&M (Leadership in Energy and Environmental Design – Existing Buildings: Operations & Maintenance) certification.

One of the credits available under the Indoor Environmental Quality (EQ) section of the LEED-EB: O&M is credit 3.4-3.6: Green Cleaning: Purchase of Sustainable Cleaning Products and Materials.

EnviroX GNx2 products and H₂Orange₂ Concentrate 117 meet the requirements for this credit!!

EnviroX Concentrate 118, Floors, Carpet Complete, EvolveO₂, Greasinator, Mineral Shock and Glass Safe are all enhanced with GNx2 technology. H₂Orange₂ Concentrate 116 and H₂Orange₂ Grout Safe also meet these requirements.

This code states that a cleaning product must meet the California Code of Regulations maximum allowable VOC levels for the specific product category. EnviroX GNx2 products and H₂Orange₂ Concentrate 117 VOC percentages are below California Code of Regulations maximum allowable VOC levels for their specific non-aerosol product categories.

In order to obtain credits for LEED-EB: O&M certification with EnviroX products, visit the USGBC's website at <http://www.usgbc.org/> for details.

Sincerely,
Team EnviroX
www.enviroxclean.com

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...Your Solution for Environmentally Preferable Cleaning

TECH MEMO

From: EnviroX Research Department
Date: Friday, May 20, 2011
Subject: H₂Orange₂[®] Concentrate 117 Bio-based Content

EnviroX's H₂Orange₂[®] Concentrate 117 bio-based content has been calculated by an independent third-party laboratory, Obiter Research Firm, in accordance with the test methods defined by the United States Department of Agriculture (USDA) under the USDA BioPreferred Program.

<http://www.ciras.iastate.edu/bioindustry/biobasedproducts/content.asp>

Under this test method, H₂Orange₂[®] Concentrate 117 scored a total percentage of 62.2% bio-based content.

USDA Product Category Minimum biobased content requirements:

<http://www.biopreferred.gov/ProposedAndFinalItemDesignations.aspx?SMSESSION=N>
Q

Multipurpose Cleaners: 56%

Please contact EnviroX Customer Relations at (800) 281-9604 if you have any questions.

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...Your Solution for Environmentally Preferable Cleaning

TECH MEMO

From: EnviroX Research Department
Date: Friday, May 20, 2011
Subject: EnviroX Concentrate 118 Bio-based Content

EnviroX's Concentrate 118 bio-based content has been calculated by an independent third-party laboratory, Obiter Research Firm, in accordance with the test methods defined by the United States Department of Agriculture (USDA) under the USDA BioPreferred Program.

<http://www.ciras.iastate.edu/bioindustry/biobasedproducts/content.asp>

Under this test method, EnviroX Concentrate 118 scored a total percentage of 57% bio-based content.

USDA Product Category Minimum biobased content requirements:

<http://www.biopreferred.gov/ProposedAndFinalItemDesignations.aspx?SMSESSION=N>
[O](#)

Multipurpose Cleaners: 56%

Please contact EnviroX Customer Relations at (800) 281-9604 if you have any questions.

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SUPER COACHVAC®/SUPER COACHVAC HEPA

Super CoachVac Specs

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- Airflow: 150 CFM
- Static Lift: 100"
- Weight: 11 lbs.
- Sound Level: 66 dB
- Intercept Micro® Filter media: 698 sq. in./10 qt.
- Four Level® Filtration: 1136 sq. in. total area
- Four Level® Filtration w/HEPA: 1190 sq. in. total area

*All specs are based on motor specs.

Includes: a 1 1/2" static-discharging vacuum hose, a 50' extension cord and two Intercept Micro Filters



Warranty*

3 years on parts, labor and motor. Lifetime on body. *See owner's manual for complete warranty details

Advantages

- A high-powered motor combined with Four Level Filtration and a 10 quart filter trap more dust with less downtime.
- Removes substantially more soil from commercial carpet and is more than 3 times faster than traditional uprights.
- Organically treated Intercept Micro Filters, along with our Four Level Filtration system, are up to 99.9% efficient at capturing dust mites, pollen, bacteria and other particulates measuring 1 micron and larger.
- The Super CoachVax has earned the Gold Seal of Approval/Green Label from the Carpet and Rug Institute (CRI), signifying the vacuum system meets higher standards for carpet cleaning effectiveness and indoor air quality.
- Meets the requirements of the U.S. Green Building Council's LEED rating system for Green Cleaning – Sustainable Cleaning Equipment.
- Utilizes mountaineering-style backpack technology to carry the vacuum comfortably and ergonomically across the hips. Backpack vacuums are proven to clean more area in less time and with less operator fatigue.
- Integrated tool belt keeps accessory tools within your grasp.
- Includes a thermal protector shut-off switch that prevents the motor from overheating due to a full filter or obstruction within the vacuum.

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Super CoachVac HEPA, with HEPA Level Filtration, is designed to handle high square-footage areas that require the utmost cleanliness. HEPA filter works in concert with ProTeam's advanced Four Level Filtration system (including organically treated Intercept Micro Filters) to capture 99.97% of airborne particles .3 micron or larger which meets HEPA filtration levels.



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Specifications

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Cord Length	50 feet Feet
Height Adjustment	6 Level
Air System	Direct Air System
Filtration	Allergen Filtration
Grip Type	Standard Grip Handle
Available in US	Yes
Commercial Unit	Yes
Motor Amps	7.0 amps Amps
Bumper Type	Scuff Guard
Nozzle Width	18 inches Inches
Assembly Required	Screw Driver
Color	Black
Dirt Cup	No
Dirt Path	Center Dirt Path
Product Working Weight LB	25.1 lbs. Pounds



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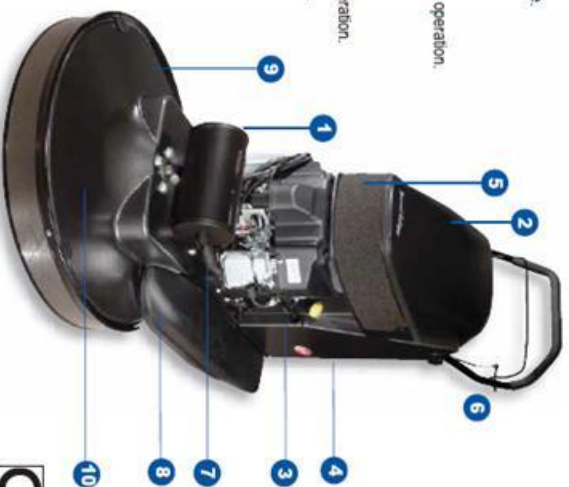


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21" (53 cm)	25,000 ft ² /hr. (2300 m ² /hr)	21" (53 cm)	2000 rpm	<89 db(A)	24.5" (62 cm)	58" (148 cm)	242 lb. (97 kg)
24" (61 cm)	28,000 ft ² /hr. (2600 m ² /hr)	24" (61 cm)	1800 rpm	<89 db(A)	27.5" (70 cm)	61" (155 cm)	248 lb. (100 kg)
28" (71 cm)	34,000 ft ² /hr. (3160 m ² /hr)	28" (71 cm)	1700 rpm	<89 db(A)	31.5" (70 cm)	65.5" (167 cm)	282 lb. (119 kg)



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