Cleaning Products Procedure and Analysis

Kendeda Building for Innovative Sustainable Design
Atlanta, Georgia, USA

January 31, 2018

living-future.org/lbc
INTRODUCTION

The Kendeda Building for Innovative Sustainable Design is an interdisciplinary learning facility within the Georgia Institute of Technology (Georgia Tech) campus in Atlanta, Georgia. The building will overlook an additional nine acres of ecological landscape, the Eco-Commons, a separate but complementary project to be completed simultaneously. The Kendeda Building for Innovative Sustainable Design will not rely on the Eco-Commons for compliance with any of the Living Building Challenge Imperatives.

The building will comprise two floors of laboratories, classrooms, offices, student spaces and an auditorium. The roof will be accessible to occupants and will be used for solar arrays, rainwater collection, and urban agriculture. The basement will be devoted to battery and water storage.

The Living Building Project is intended to be a replicable demonstration of regenerative design for the southeastern United States. The project team intends to pursue all twenty Imperatives of the Living Building Challenge v3.1.

In an effort to help Georgia Tech evaluate and update campus programs to align with the intent and requirements of the Living Building Challenge, the International Living Future Institute is working with Georgia Tech on several research and analysis projects. These projects look at how innovations and new procedures can carry over beneficially into whole campus activities related to LBC. This report focuses on green cleaning and has evaluated the campus cleaning protocol and inventoried chemicals used for housekeeping activities. Review of specific products, process of confirming program compliance, and suggested alternate products are listed below.

REVIEWED DOCUMENTS

CALLS BETWEEN ILFI + GEORGIA TECH TEAM
Kickoff call with Drew Cutright, August 30, 2017
Call with Drew Cutright and Housekeeping team to review draft Cleaning report, September 21, 2017
Call with Drew Cutright to review final Cleaning report, January 19, 2017

DOCUMENTATION REVIEWED
Georgia Institute of Technology, Green Cleaning Manual, dated August 14, 2017
Operations Manual Draft, dated August 14, 2017
Chemical Room Inventory, dated August 16, 2017; update sent September 21, 2017

CLEANING PRODUCT PROCEDURE AND ANALYSIS

The Living Building Challenge requires project teams to review all cleaning chemicals under the Healthy Interior Environment Imperative to ensure ongoing indoor air quality while preventing the exposure of harmful cleaning chemicals to campus cleaning staff and building occupants. The relevant requirements of the Imperative are:

I08-Healthy Interior Environment: To promote good indoor air quality, a project must create a Healthy Indoor Environment Plan that explains how the project will achieve an exemplary indoor environment and achieve the following:
- An outline of a cleaning protocol that uses cleaning products that comply with the EPA Design for the Environment label (or international equivalent)
  - Note: the EPA Design for the Environment program is now call EPA Safer Choice.

SUMMARY COMMENTS

The Georgia Tech Green Cleaning Manual outlines protocol for product evaluation and purchasing, cleaning procedures, safe handling procedures, and staff training. Under the Cleaning Products section on page 7, the document states, “The following guidelines should be considered when selecting cleaning products: Third Party Certified Product—GreenSeal, Greenguard, or Environment Choice.” ILFI advises that the document be revised to require an EPA Safer Choice label or formulation review for all formula products including but not limited to: glass cleaners, general purpose cleaners, washroom cleaners, carpet cleaners, laundry detergents, graffiti removers, boat and car care, drain cleaners, personal care, and floor care and other industrial products.
The remaining document exceeds the Living Building Challenge cleaning protocol requirements. The Georgia Tech Green Cleaning Manual does an exemplary job of highlighting the campus standard for green cleaning. Once revised, the full Green Cleaning Manual should be incorporated into the Kendeda Building Operations and Maintenance Manual.

CLEANING PRODUCT REVIEW

Products used by the Building Services and Housing departments were provided by Georgia Tech on the Material Management Inventory spreadsheet, summarized below. Products outside the scope of the EPA Safer Choice program and Living Building Challenge requirements have been listed below and do not require review under the Healthy Interior Environment Imperative; all other products were reviewed for compliance with the EPA Safer Choice program. Products with an EPA Safer Choice label are listed below; Products without an EPA Safer Choice label (non-compliant products) and suggested alternate products with an EPA Safer Choice label are listed below. All alternate products should be reviewed to confirm they meet the Georgia Tech cleaning performance criteria.

Products listed as “no confirmed alternate found” did not have a direct match in the EPA Safer Choice database using keywords in the product description. No confirmed alternate does not mean there are no certified products that meet the Georgia Tech performance criteria. The project team is encouraged to research options in the Safer Choice database and contact manufacturers to confirm product options. For example, baseboard cleaners did not return a match, but one or more of the hard surface floor care products listed in the Safer Choice may perform the required function.

The full list of EPA Safer Choice products can be viewed at https://www.epa.gov/saferchoice/products. The database can be sorted by sector and product type.

COMPLIANT CLEANING PRODUCTS

Below is the list of cleaning products listed on the Material Management Inventory spreadsheet that were confirmed as compliant with the EPA Safer Choice program and the Living Building Challenge requirements.

- CLR - compliant, EPA Safer Choice label
- Rust Oleum Corp Krudd Kutter, EPA Safer Choice label
- WD-40, EPA Safer Choice label
- American Formula Green Choice EnviroShine, EPA Safer Choice label
- Zing, Cleaning and Polishing Compound

NON-COMPLIANT CLEANING PRODUCTS

Below is the list of cleaning products listed on the Material Management Inventory spreadsheet that were confirmed as non-compliant with the EPA Safer Choice program and the Living Building Challenge requirements. Products listed below must either be submitted for Safer Choice evaluation by the manufacturer or an alternate, compliant product, must be used.

- Dial, Soap and Hairwash
- Tenant Company, Fast 365 Neutral Cleaner
- Pro-Link Inc, Grout Brightener
- Kaivac Cleaning Systems, Kiablooey
- Kaivac Cleaning Systems, Kibosh
- Kaivac Cleaning Systems, Kiadry
- Pro-Link, Optimum Foaming Soap
- SC Johnson, Pledge
- Pro-Link, Green Certified Foam Soap
- PG, Tide
- Clorox Company, Tilex
- American Formula, Green Choice Enviro Strip
- Racine Industries Inc, Host Dry Carpet Cleaning
- Hillyard Floor Care, Hillyard Protective Coating
- Windsor Karcher Group, Icapsol Encapsulating Interim Cleaner
- Lithofin, Lithofin DCC Cleaner Conditioner
Buckeye International, Penetrate
Ecolab, Stone Medic Marble Polishing
Buckeye International, Verde Ultra
AMF, Full Power Oven Cleaner
American Formula, Bio Based Bowl Cleaner
American Formula, Precision System 2 Lemon All Disinfectant
American Formula, Green Choice Degreaser Concentrate
American Formula, Green Choice Enviro Shine
American Formula, Green Choice Glass Cleaner
American Formula, Green Choice Extracto
American Formula, Shower Power
American Formula, Bio Based Stainless Cleaner
American Formula, Viraseptic
American Formula, Oxy Orange 2n1
Betco, Baseboard Cleaner
Cerama Bryte, Ceramic Baseboard Cleaners
Hillyard Floor Care, Super Shine All
Spartan, NABC Non Acid Disinfectant Cleaner
Spartan, Ecolyer
Pro Link Inc, First Choice Carpet Pre Spray
Pro Link Inc, Last Touch Carpet Rinse and Neutralizer
Pro Link Inc, Carpet Professional Spotting Kit
Pro Link Inc, Carpet Tannin Treatment
Pro Link Inc, Grout Cleaner
Pro Link Inc, Crème Cleanser
Pro Link Inc, Optimum MH255 hand Soap
Pro Link Inc, Chewing Gum Remover
Purell, Surface Disinfectant
Wash Safe, Rust Off
Rotanim, Graffiti Off
Prorestore Products, Mildewsice, Bateriacide, Fungicide

ALTERNATE CLEANING PRODUCT OPTIONS
Below is the list of suggested alternate cleaning products for consideration by Georgia Tech. The list below is confirmed as compliant with the Safer Choice program and Living Building Challenge requirements, but Georgia Tech should review each product and confirm the options below can meet the cleaning performance requirements for each application required.

Floor Cleaner
- Clorox Co: Clorox Commercial Solutions Green Works 99% Naturally-Derived Neutral Floor Cleaner Concentrate
- Anderson Chemical Co: Neutral Floor Cleaner

Descale/Restroom Cleaner
- Amano Pioneer Eclipse Corporation: EnviroStar Green Mild Acid Washroom Cleaner 333
- Brady Industries: Brady #1 Mild Acid Restroom Cleaner

Hand Soap
- ABC Compounding Co: LYNX Crystal Foam Handwash
- American Cleaning Solutions: Focus FHS 77 Foaming Hand Soap Fragrance Free

Wood Furniture Polish
- Chase Products Co: Champion SprayOn Green World N Furniture Cleaner and Polish
- Office Depot Office Max: Highmark Furniture Polish, Citrus Scent

Laundry Detergent
- Earth Friendly Products: ECOS Laundry Detergent
- Ecolab Inc: E-Max Detergent

Tile Cleaner
- Aqua ChemPacs LLC: Aqua ChemPacs All Purpose Heavy Duty Cleaner
- Jelmar LLC: CLR PRO Bath Cleaner
Grout Cleaner
- Simply Spotless New York: Grout Cleaner
- Black Diamond Stoneworks: Grout Cleaner

Wax Stripper
- Wayne Chemical Company: Harmony Power Lifter Wax Stripper
- Zing International: Floor Prep Green Floor Cleaner & Stripper
- ABC Compounding Co: LYNX Floor Finish Remover

Dry Carpet Cleaning System
- Crestek: Dry Magic
- Cleantronics Industries: Dry Mist Green Concentrate

Encapsulating Carpet Cleaner
- American Cleaning Solutions: Focus CX 88 Carpet Encapsulation Detergent
- North American Corporation of Illinois: Spectrum Select Trifecta 3n1 Encapsulating Carpet Cleaner

Stone Cleaner
- Boston Stone Restoration: GT-1 Natural Stone & Surface Cleaner
- MB Stone Care and Supply: GT-1 Natural Stone & All Surfaces Daily Cleaner

Floor Finish
- Zing International: Ultra Reflections Floor Finish
- ABC Compounding Co: LYNX Floor Finish

Toilet Bowl Cleaner
- Triple F Distributing: Tub, Tile, and Bowl Cleaner
- Diamond Chemical Company: Green Key Bowl Cleaner

Hard Surface Cleaner/Disinfectant
- Clorox Commercial Solutions: Green Works All Purpose Cleaner
- LynxLab: Lynxlab Perozide h2o2 All Purpose Cleaner

Degreaser
- American Chemical Company: Natural Dose All-Purpose Cleaner/Degreaser
- Mission Laboratories: Enviro Pure Heavy Duty Degreaser

Glass Cleaner
- ABC Compounding Co: LYNX LXL-1 Glass and Multisurface Cleaner
- Anderson Chemical Co: Brilliant Glass Cleaner

Shower Cleaner
- Earth Friendly Products: Shower Cleaner
- Stoker Inventors Group: ShowerCleanse Enviro Descaling Solution

Stainless Steel Cleaner
- Bright Solutions: Steel Shine
- North American Corp of Illinois: Spectrum Select Soy-Based Stainless Steel Cleaner

Hard Surface Cleaner/Disinfectant
- Clorox Commercial Solutions: Green Works All Purpose Cleaner
- LynxLab: Lynxlab Perozide h2o2 All Purpose Cleaner

Cleaner/Deodorizer
- American Cleaning Solutions: Focus NC 111 Neutral Cleaner/Deodorizer
- Anderson Chemical Co: Fresh Air Odor Neutralizer

Non-Acid Bathroom Cleaner
- Amano Pioneer Eclipse Corporation: EnviroStar Green Non-Acid Washroom Cleaner 334
- Clorox Commercial Solutions: Green Works 99% Naturally-Derived Bathroom

Carpet Pre Spray
- Amano Pioneer Eclipse Corporation: EnviroStar Green Carpet Extractor & Pre-Spray Cleaner 831
• Strong Industries: NATURALLY Encapsulation & Prespray
  
  Carpet Rinse
  • Tri-Plex Technical Services, LTD.: Go Clean Rinse
  
  Carpet Spotter
  • National Purity, LLC: ECO All Purpose Spotter
  • Bright Solutions: Oxygen Carpet Spotter
  
  Tannin Remover
  • Bright Solutions: Debrowning Rinse
  
  Descale/Restroom Cleaner
  • Amano Pioneer Eclipse Corporation: EnviroStar Green Mild Acid Washroom Cleaner 333
  • Brady Industries: Brady #1 Mild Acid Restroom Cleaner
  
  Rust Remover
  • Jelmar LLC: CLR PRO Calcium, Lime & Rust Remover
  • One Biotechnology: ECOLOX Mineral & Rust Remover
  
  Mildewicide/Bactericide/Fungicide
  • Biotech Medical LLC: SpectraSan Mold & Mildew Stain Cleaner

NO CONFIRMED ALTERNATE FOUND
Below is the list of cleaning products that do not have a direct match available in the EPA Safer Choice database. The project team is encouraged to review the EPA Safer Choice database for products that can meet the project’s cleaning performance criteria.

Betco Baseboard Cleaner
Cerama Bryte Ceramic Cooktop Cleaner
Spartan Ecolyer
Pro-Link Grout Brightner
Pro-Link Crème Cleanser
Pro-Link Chewing Gum Remover
Purell Surface Disinfectant
Kalvac Cleaning Systems Kaibosh
Kalvac Cleaning Systems Kaidry
Rotanim Graffiti Off

NOT WITHIN THE LIVING BUILDING CHALLENGE SCOPE
Below is the list of cleaning products and systems that are not within the scope of the EPA Safer Choice program and the Living Building Challenge. These products do not require review and may be used on the project.

Urinal Screens
Silicone Lubricant
Ant and Roach Killer
Spider and Scorpion Killer
Flying Insect Killer
Insect Repellant
Geneon Water Based Cleaning systems

RESOURCES
US EPA Safer Choice Overview
https://www.epa.gov/saferchoice

US EPA Safer Choice Product Database
https://www.epa.gov/saferchoice/safer-ingredients#searchList

US EPA Safer Choice Chemical Choice Ingredient List
https://www.epa.gov/saferchoice/safer-ingredients#searchList

GreenSeal Program Overview
http://www.greenseal.org/Home.aspx

GreenSeal Product Finder
http://www.greenseal.org/FindGreenSealProductsandServices.aspx