

**Sustainability Task Force
Green Purchasing/ Green Cleaning
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The mission of the Indiana University Task Force on Campus Sustainability is to develop a framework for Indiana University's plan for sustainability. The university defines sustainability as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (1) Thus with Indiana University spending \$1,851,397.45 annually on cleaning chemicals, janitorial products, equipment, etc. the opportunity to incorporate green cleaning into Indiana University's sustainability efforts could have a widespread impact on both the campus and the environment.

Mission Statement

This project will investigate the growing trends of sustainability and will specifically focus on the concept of green cleaning. The federal government, through Executive Order 13101 has defined environmentally preferable or "green" as: "...products and services that reduce the health and environmental impacts compared to similar products and services used for the same purpose." (3) Based on this definition green cleaning is defined as "cleaning that protects health without harming the environment." (4)

Research activities on green cleaning included:

- Through phone and in-person interviews, research on Big Ten Universities' efforts involved with the development and implementation of green cleaning programs and with schools that applied for the *Green Cleaning Awards for Schools and Universities* from American School & University, The Green Cleaning Network and the Healthy Schools Campaign.
- Review of existing programs such as US Green Building Council's *LEED for Existing Buildings Rating System (LEED-EBOM)*, Healthy Schools Campaign's *Quick & Easy Guide to Green Cleaning in Schools*, Hospitals for a Healthy Environment's *10 Step Guide to Implement Green Cleaning in Healthcare*, and San Diego Community College District's green product contract all of which identify standards for green cleaning.
- Templates from Nichols (a great lakes regional distributor), University of California, University of California Santa Barbara, University of Colorado and University of Northumbria for green cleaning policies.
- Meeting with Governor Mitch Daniels' staff to discuss green buildings and related issues.

Based on the above research, directions for implementing a green cleaning program at Indiana University is provided through the following:

- Recommendations based on the interviews with peer institutions identifying alternative green cleaning chemicals, janitorial paper products, equipment and other materials used in cleaning, along with alternative green cleaning methods.
- A Green Cleaning Product Addendum to provide specifications that could be used for purchasing.

- A movement report from HP Products (IU's current product supplier) and research that indicates ways for further improvement.

Introduction

According to a recent article in *Real Estate Weekly*, "As the industry has become more aware of the benefits of green cleaning, the products have significantly improved, and because they are more readily available... it now costs nearly the same to buy green products [as traditional products] whereas five years ago, it would have been 50 percent more." (5) The shift of the cleaning industry towards sustainability has produced green products that are easy to access, perform as good if not better compared to their conventional counterparts and are cost competitive in a number of categories including cleaning chemicals, janitorial paper products, equipment and other items used during the cleaning process. Thus, green cleaning is looked at as an easy "low hanging fruit" that many organizations undertake when beginning their journey to sustainability.

Methods

The methodology that was followed consisted of the following steps:

Initial research focused on developing an understanding of the basic concepts of green cleaning; this included reading *Green Cleaning for Dummies* and reviewing several other cleaning industry books, trade industry journals on the subject, a review of a number of websites and personal interviews with multiple experts in the field.

The first set of interviews included schools that applied for the *Green Cleaning Awards for Schools and Universities* sponsored by the Green Cleaning Network, a non-profit educational organization whose mission is to accelerate the adoption of green cleaning and the Healthy Schools Campaign another non-profit working to create schools that are healthier for students and staff. The universities examined included: University of Washington, Georgia Institute of Technology, Slippery Rock University, Western Washington University, Delta College, Union College and Harvard. The review included:

- history of the schools green cleaning program
- a description of cleaning procedures and strategies
- policies or processes used to share responsibility between the institution
- training
- ongoing internal and external communications
- an explanation of the incorporation of green cleaning products including chemicals, equipment, janitorial paper products and supplies
- whether the products met specific certifications
- any innovations that should be considered noteworthy.

After the research was compiled the benefits were assessed for the new cleaning chemicals, janitorial products, supplies and equipment. This was a valuable strategy because the program concisely documents what schools have done to improve their green cleaning efforts, and the awards process also helped identify which college and universities were "best in class" for their green cleaning initiatives. A

goal of Indiana University has been to become a leader in both sustainability and green cleaning; therefore, these awards are perfect models to help achieve Indiana University's desired success.

The next step was to further refine the research and to interview Big Ten Universities on their development of their green cleaning programs. Phone interviews were conducted with Purdue, University of Illinois, Northwestern University, Ohio State University, University of Wisconsin, Penn State University and University of Minnesota. In addition, personal interviews were conducted with personnel from both University of Michigan and Michigan State University. The interviews included an in-depth examination of the schools green cleaning program, products (chemicals, janitorial products, paper products, etc), cost comparisons, key issues or questions that should be addressed while creating and implementing a green cleaning program, green cleaning policies and information on training and communication both of which are extremely important for a successful green cleaning program.

Additional interviews were done with the U.S. Green Building Council, where we discussed their *Leadership for Energy and Environmental Design for Existing Buildings Rating System (LEED-EB)*. Interviews concentrated in two specific areas. The first was the overall rate of adoption of *LEED-EB* and the uptake by large public universities to determine if *LEED-EB* would be appropriate for Indiana University. The second part of the interview was to discuss model green cleaning policies, which are a requirement within *LEED-EB*. Samples of the green cleaning policies from public universities were requested which reflected what the U.S. Green Building Council considered to represent the highest quality standards. These samples were used to help formulate a similar green cleaning policy for Indiana University.

A recommended green cleaning policy for Indiana University was created by reviewing and compiling information from *LEED-EB's* green cleaning credits, templates for green cleaning policies and specifications on green cleaning products that meet Green Seal or Environmental Choice's guidelines from Nichols (a Great Lakes Regional Distributor). Policies were also reviewed from the University of California, University of California Santa Barbara, University of Colorado and University of Northumbria green cleaning/purchasing policies. The recommended green cleaning policy and product specifications are included in Appendices A and B respectively.

LEED-EB's cleaning credits would play a significant role in the shaping a green cleaning policy which, if enacted, will simultaneously contribute to the generation of credits for the *LEED-EB* program should the University find this of value at some future time. These credits are designed with the intentions of reducing exposure of building occupants and maintenance personnel to potentially hazardous chemical, biological and particle contaminants, which adversely impact air quality, human health, building finishes, building systems and the environment. (6)

A formal meeting was held by Governor Mitch Daniels staff and Representative Matt Pierce in Indianapolis on the subject of green buildings and green cleaning in the state of Indiana. During this meeting the governor's Executive Order 08-14 was reviewed which helped formulate the beginning of Indiana University's green cleaning policy. A formal copy of Executive Order 08-14 can be found at: http://www.in.gov/gov/files/EO_08_14.pdf

A green cleaning product addendum is included in Appendix C to help identify the appropriate products for use in a green cleaning program. The addendum credits a number of leaders and programs in the green cleaning movement. These include: *LEED for Existing Buildings Rating System (LEED-EBOM)*,

Healthy Schools Campaign's *Quick and Easy Guide to Green Cleaning in Schools*, Hospitals for a Healthy Environment's *10 Step Guide to Implement Green Cleaning in Healthcare*, Pennsylvania's *Guidelines for Creating High-Performance Green Buildings*, and San Diego Community College District's Green Purchasing Specifications. The main purpose of the green cleaning product addendum is to provide Indiana University's purchasing department with language that could be added to their existing contracts to be able to include the appropriate green requirements that would make their purchases consistent with the various leaders in the green cleaning movement.

For a clearer illustration of the purchasing process and green cleaning product information, a meeting was held with Indiana University's purchasing department and HP Products (IU's product distributor). During this meeting a movement report was presented. The movement report not only contains products that were bought from HP Products within the past 12 months, but it also identifies quantities that have been purchased. A close study of Indiana University's movement report should yield new product recommendations that will continue to further IU's goal towards campus sustainability.

Findings/Results

The *Green Cleaning Awards* by the Green Cleaning Network laid the foundation for a model green cleaning program and helped identify cleaning product specifications, program history, policies, processes and training which are imperative for creating a successful program. Obvious conclusions proved that each school found different chemical manufactures who produced "certified" green cleaning chemicals that met their expectations and cleaned well. The popularity of microfiber cloths/mops and Tennant Auto-Scrubbers seemed universal between the seven schools. It will be important for Indiana University to consider what these schools, that have been reviewed, have done to create such an accomplished green cleaning program.

A compilation of information obtained from interviews with the Big Ten Universities shows that Indiana University appears to be right in the middle for their green cleaning efforts. Chemical products used by the Big Ten Schools range from Johnson Diversity, Spartan, Betco and 3M. The green cleaning products from these companies were certified by Green Seal and meet their standard for industrial and institutional cleaning chemicals (GS-37).(7)

Johnson Diversity's Aquaria Floor Finish also seems popular among many of the Big Ten schools. The Aquaria Floor Finish is formulated without zinc or other heavy metals; thus, meets Green Seal's standard for industrial and institutional floor care products based on its reduced human and aquatic toxicity and reduced smog protection potential (GS-40).(8) In the future Indiana University should consider using a product with comparable qualities.

Within the movement report, HP lists all products they supply to Indiana University as a whole, this includes satellite campuses. Because the report is formatted in this way, it is easy to identify that within each product category there are numerous brands and products bought for the same use. It would be to Indiana University's benefit to reduce the number of brands and products bought, and instead buy more of one individual product. This would be easier on the purchasing end, and could potentially reduce costs.

The meeting with HP demonstrated their desire to help Indiana University implement a green cleaning program. With the help of HP Products, Indiana University has already taken a large step in replacing both soap and soap dispensers to GOJO Foaming Hand wash, thus reducing the amount of soap used significantly. Indiana University has also focused a great deal of effort into finding both a toilet tissue and paper towel that has a high recycled content and simultaneously meets customer satisfaction. However it is clear that more can be done.

See Appendix D at end of report to view Indiana University's movement report provided by HP Products.

Conclusions/Recommendations

Based on the research that was conducted with both the Big Ten schools and other universities it appears that Indiana University is well situated to implement a green cleaning program that meets the objectives of Indiana University's sustainability goals. The recommended green cleaning policy is based on the requirements of the U.S. Green Building Council's LEED Rating System, which in turn has led to the development of product purchasing specifications that can be implemented by the various departments that are responsible for cleaning Indiana University's campus. Furthermore, based on meetings with Indiana University's current product distributor it appears that these products are both readily available and comparable in cost to what is currently being used. These recommendations will place Indiana University as one of the leading institutions on green cleaning in the country.

References

- (1) Sustainability Task Force Website: https://www.indiana.edu/~sustain/mission-statement/#_ftn1
- (2) "Frequently Asked Questions." The Ashkin Group LLC- The Green Cleaning Experts. The Ashkin Group. Retrieved 7/13/08 from <http://www.ashkingroup.com/faq.html>
- (3) Ashkin, Stephen. "Green Cleaning." Nichols. Western Michigan University, Kalamazoo. 28 July 2008.
- (4) "The Evolution of Green Cleaning – To Infinity and Beyond" Retrieved 7/13/08 from <http://www.one-source.com/en/evolution.html>.
- (5) United States. Green Building Council. LEED-EB Cleaning Credits. Washington, DC: U.S. Green Building Council, 2005.
- (6) "GreenSeal Standards and Certification." Retrieved 9/8/08 from <http://www.greenseal.org/certification/environmental.cfm>
- (7) "Aquria Floor Finish." Johnson Diversity-Cleaning is just the beginning. Johnson Diversity. Retrieved 7/13/08 from <http://www.johnsondiverse.com/wcmt/ProductAttachments/en-US/PIS/SPC712%20Aquria.pdf>

Appendix A

The following is a recommended green cleaning policy based on information from *LEED-EB*, Nichols Supply, University of California, University of California at Santa Barbara, University of Colorado and University of Northumbria.

Green Cleaning Policy

Indiana University is committed to providing a healthy and productive work environment as well as a clean and well-maintained building. This policy outlines the specific cleaning practices which will maintain good indoor air quality, increase occupant health and comfort, assure a clean building, provide a healthy environment for the custodial crew and be fiscally responsible.

Use of green cleaning products:

In compliance with Indiana Executive Order 08-14 *Establishment of Energy Efficient State Building Initiative* it shall be the policy of Indiana University to use green products in multiple cleaning product categories (e.g. cleaning chemicals, janitorial paper products and powered equipment) which meet the guidelines for green cleaning products and practices based on nationally recognized programs such as the U.S. Green Buildings Council's *LEED for Existing Buildings Rating System*.

Green products are defined as, *"products that reduce the health and environmental impacts compared to similar products used for the same purpose"*.

- Cleaning products meet one or more of the following standards for the appropriate category:
 - Green Seal GS-37, for general-purpose, bathroom, glass and carpet cleaners used for industrial and institutional purposes.
 - 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 the above standards meet one or more 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 traps 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.
 - LEED 2009 Existing Buildings: Operations & Maintenance for 2nd Public Comment 65
- 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.

Appendix B

The following are recommended specifications that can be added for product purchasing that is consistent with the recommended green cleaning policy provided for Indiana University. These recommended specifications are based off of various “roadmaps” such as: US Green Building Council’s *LEED for Existing Buildings Rating System (LEED-EBOM)*, Healthy Schools Campaign’s *Quick & Easy Guide to Green Cleaning in Schools*, and Hospitals for a Healthy Environment’s *10 Step Guide to Implement Green Cleaning in Healthcare*.

CHEMICAL CLEANING PRODUCTS:

1. All Purpose Cleaners

All Purpose Cleaners shall meet the requirements of Green Seal’s GS-37 and/or Environmental Choice’s CCD-146.

2. Glass Cleaners

Glass Cleaners shall meet the requirements of Green Seal’s GS-37 and/or Environmental Choice’s CCD-146.

3. General Purpose Cleaners

General Purpose Cleaners shall meet the requirements of Green Seal’s GS-37 and/or Environmental Choice’s CCD-146.

4. Washroom Cleaners (non disinfecting)

Washroom Cleaners shall meet the requirements of Green Seal’s GS-37 and/or Environmental Choice’s CCD-146.

5. Floor Care Products (Finishes and Sealers)

Floor Care Products (Finishes) shall be durable and slip resistant. In addition, the finish shall be free of zinc (metal-free) OR shall meet the requirements of Green Seal’s GS-40 and/or Environmental Choice’s CCD-147.

6. Floor Care Products (Strippers)

Floor Care Products (Strippers) shall meet the requirements of Green Seal’s GS-40 and/or Environmental Choice’s CCD-147.

7. Carpet Care Products (Shampoo and Extraction)

Carpet Care Products shall meet the requirements of Green Seal’s GS-37 and/or Environmental Choice’s CCD-148

8. Degreasers

Degreasers shall meet the requirements of Green Seal's GS-34 and/or Environmental Choice's CCD-110 for Cleaning and Degreasing Compounds

9. Hand Soaps

Hand soaps shall be free of antimicrobial ingredients except as preservatives or where required by code or regulation (i.e. food service and healthcare) OR shall meet the requirements of Green Seal's GS-41 and/or Environmental Choice's CCD-104

Preference will be given for the use of foaming dispensers to minimize product use.

10. Odor Control Products

Odor Control products shall meet the following requirements:

- Environmental Choice's CCD-112 Digestion Additives for Cleaning and Odor Control
- Environmental Choice's CCD-113 Drain or Grease Traps Additives
- Environmental Choice's CCD-115 Odor Control Additives

11. Other Products NOT Otherwise Addressed

Other products NOT otherwise addressed (i.e. furniture polish, metal polish, disinfectants) shall at a minimum meet the requirements of the California Code of Regulations (<http://www.arb.ca.gov/consprod/regs/cp.pdf>) OR the Canadian National Office of Pollution Prevention (<http://www.ec.gc.ca/nopp/voc/en/secCP.cfm>) for the maximum amount of volatile organic compounds (VOCs) allowed by the specific product category.

12. Reporting on Chemical Purchases

Documentation shall be provided on individual product certifications or other technical data to demonstrate compliance with these requirements. A calculation of the fraction of covered materials purchased that meet one or more of the specified criteria (on a cost basis) shall be provided on a quarterly basis.

PAPER PRODUCTS:

13. Paper Hand Towels

Paper hand towels shall meet the minimum requirements of the U.S. Environmental Protection Agency's *Comprehensive Procurement Guidelines* (minimum of 40% post-consumer recycled content) OR Green Seal's GS-09 and/or Environmental Choice's CCD-086 and/or Chlorine Free Products Association (CFPA) Certification.

14. Toilet Tissue

Toilet tissue shall meet the minimum requirements of the U.S. Environmental Protection Agency's *Comprehensive Procurement Guidelines* (minimum of 20% post-consumer recycled) content OR Green Seal's GS-01 and/or Environmental Choice's CCD-082 and/or Chlorine Free Products Association (CFPA) Certification.

15. Reporting on Paper

Documentation shall be provided on individual product certifications or other technical data to demonstrate compliance with these requirements. A calculation of the fraction of covered materials purchased that meet one or more of the specified criteria (on a cost basis) shall be provided on a quarterly basis.

PLASTIC TRASH CAN LINERS

16. Plastic Trash Can Liners

Liners shall meet the minimum requirements of the U.S. Environmental Protection Agency's *Comprehensive Procurement Guidelines* (minimum of 10% post-consumer recycled content). NOTE: size of liners and thickness must be added.

17. Reporting on Plastic Trash Can Liners

Documentation must be provided to demonstrate compliance with these requirements. A calculation of the fraction of covered materials purchased that meet one or more of the specified criteria (on a cost basis) shall be provided on a quarterly basis.

JANITORIAL POWERED EQUIPMENT

18. Vacuum Cleaners

Vacuum Cleaners shall meet the requirements of the Carpet & Rug Institute's (CRI) Green Labeled vacuums.

19. Carpet Extraction Equipment

Carpet Extraction Equipment shall meet the requirements of the Carpet & Rug Institute's (CRI) CRI Bronze Seal of Approval at a minimum. Hot water extraction equipment shall be capable of removing sufficient moisture such that carpets can dry in less than 24 hours.

20. Automatic Floor Scrubbing Machines

Automatic Floor Scrubbing Machines shall be equipped with variable-speed chemical feed pumps to minimize the use of cleaning chemicals OR shall clean without the use of added cleaning chemicals.

21. Floor Burnishers

Floor Burnishers shall contain shrouds and active vacuum attachments to capture particles produced during use. Propane-powered floor equipment shall have high-efficiency, low-emissions engines. Battery powered equipment shall be equipped with environmentally preferable gel or comparable batteries.

22. Reporting on Janitorial Powered Equipment

Documentation shall be provided to demonstrate compliance with these requirements. A log shall be kept for all powered janitorial equipment to document the date of equipment purchase and all repair and maintenance activities and include manufacturer's technical materials for each type of equipment in use in the logbook.

Appendix C

The following is an example from San Diego Community College District's green cleaning product supplies which are required to meet LEED for High Performance Operations. This example represents how the specifications found in various programs could be applied to standard purchasing requirements.

ITEM #	DESCRIPTION	QTY	UNIT	BRAND / ORDER #	UNIT PRICE	EXTENDED AMOUNT	DILUTION RATE FOR MEDIUM SOILS	COST PER USABLE GAL
1	GREEN CLEANER, general purpose/floor cleaner. Must be certified by Green Seal (GS-37) or Environmental Choice (CCD 110 or CCD 146I).		GAL		\$	\$	1:64	\$
2	GREEN CLEANER, glass, windows and mirrors. Must be certified by Green Seal (GS-37) or Environmental Choice (CCD 146A).		GAL		\$	\$	1:128	\$
3	GREEN CLEANER, restroom & tile cleaner. Must be certified by Green Seal (GS-37) or Environmental Choice (CCD 146J).		GAL		\$	\$	1:64	\$
4	GREEN CLEANER, carpet and upholstery cleaner. Must be certified by Green Seal (GS-37) or Environmental Choice (CCD 148A).		DRUM		\$	\$	1:13	\$
5	GREEN DEGREASER, heavy-duty. Must be certified by Green Seal (GS-34) or Environmental Choice (CCD 146E or F).		GAL		\$	\$	1:30	\$
6	GREEN FLOOR FINISH. Must be certified by Green Seal (GS-40) or Environmental Choice (CCD-147). 55-gal/dr.		DRUM		\$	\$	RTU	\$
7	GREEN FLOOR FINISH, same as above, 5 gallon plastic pail.		PAIL		\$	\$	RTU	\$
8	GREEN STRIPPER, floor, must be certified by Green Seal (GS-40) or Environmental Choice (CCD-147), 5 gallon plastic pail.		PAIL		\$	\$	1:12	\$
9	GREEN STRIPPER, same as above, 55-gal/dr.		DRUM		\$	\$	1:12	\$
10	GRAFFITI REMOVER, non-aerosol, citrus or soy based, non toxic spotter to remove paint, oil, grease, marker and crayon from concrete, stone, metal and plastic. Quart container.		CS		\$	\$		\$
12	SOAP, lotion. Must be certified by Green Seal (GS-41) or Environmental Choice (CCD-104) for use in _____ ml sealed dispenser packs, _____ per case.		CS		\$	\$		\$

ITEM #	DESCRIPTION	QTY	UNIT	BRAND/ORDER #	UNIT PRICE	EXTENDED AMOUNT
13	LINER, can 40"x46", Dark LLDPE, minimum 40% recycled content, stretchable, 1.5 mil gauge, approx. 100/cs, for heavy use.		CS		\$	\$
	Indicate case quantity:					
14	LINER, can, 33" x 40", Dark LLDPE, minimum 40% recycled content, 1.5 mil gauge, approx. 150/cs, for extra heavy use.		CS		\$	\$
	Indicate case quantity:					
15	LINER, can, 24" x 24", Dark LLPPE, minimum 10% recycled content, 7.5 gal, .36 mil gauge, approx. 1000/cs, for general purpose use.		CS		\$	\$
	Indicate case quantity:					
16	LINER, can, 24" x 24", Dark LLDPE, minimum 10% recycled content, .74 mil gauge, approx. 500/cs, for general purpose use.		CS		\$	\$
	Indicate case quantity:					

ITEM #	DESCRIPTION	QTY	UNIT	BRAND/ORDER #	UNIT PRICE	EXTENDED AMOUNT
17	TISSUE, toilet, universal, 1-ply on roll, not less than 100% recycled paper containing minimum 20% post-consumer fiber, bleached process chlorine-free. SPECIFY ANY UNIQUE REQUIREMENTS RELATING TO LENGTH OF ROLL, SIZE OR DISPENSERS.		CS		\$	\$
	Indicate case quantity:					
18	TISSUE, toilet, universal, 2-ply on roll, not less than 100% recycled paper containing minimum 20% post-consumer fiber, bleached process chlorine-free. SPECIFY ANY UNIQUE REQUIREMENTS RELATING TO LENGTH OF ROLL, SIZE OR DISPENSERS.		CS		\$	\$
	Indicate case quantity:					

19	TOWELS, paper, roll, universal, not less than 100% recycled paper containing minimum 40% post consumer fiber, unbleached or bleached process chlorine free. SPECIFY ANY UNIQUE REQUIREMENTS RELATING TO LENGTH OF ROLL, SIZE OR DISPENSERS.		CS		\$	\$
	Indicate case quantity:					
20	TOWELS, paper, roll, universal, not less than 100% recycled paper containing minimum 40% post consumer fiber, unbleached or bleached process chlorine free. SPECIFY ANY UNIQUE REQUIREMENTS RELATING TO LENGTH OF ROLL, SIZE OR DISPENSERS.		CS		\$	\$
	Indicate case quantity:					

ITEM #	DESCRIPTION	QTY	UNIT	BRAND/ORDER #	UNIT PRICE	EXTENDED AMOUNT
21	Vacuum cleaner, upright. Must be certified by the Carpet & Rug Institute and operate with a sound level less than 70dBA. 12 inches.		EA		\$	\$
22	Vacuum cleaner, upright. Must be certified by the Carpet & Rug Institute and operate with a sound level less than 70dBA. 15 inches.		EA		\$	\$
23	Vacuum cleaner, upright. Must be certified by the Carpet & Rug Institute and operate with a sound level less than 70dBA. 18 inches.		EA		\$	\$
24	Vacuum cleaner, backpack. Must be certified by the Carpet & Rug Institute and operate with a sound level less than 70dBA.		EA		\$	\$