GS-42 Certification & More: Leveraging the Process

Sandra A. Smith
Quality Assurance & Staff Development Manager
Facilities Management, UVa
*This cleaning service meets Green Seal TM Standard GS-42 based on waste minimization, building-specific operational procedures, effective custodial training, and use of products with limits on human & environmental toxicity.

• First Higher Ed Institution in Virginia!
• Third in the nation!
Ten Months Earlier…

- The Vision
- The Education
- The “How to”
  - Building Wellness Institute
  - Get buy-in
  - Involve Everyone
    - TEAM!
  - Share project ownership
  - Leverage process for other gains
  - Sustain momentum
  - Balance normal workload
  - Share our story
The Vision…

▲ New Associate Director
  • Culture shift
    • A new way
  • Be more, be best
    • Knowledge, Skills, Abilities
  • Set the bar high
    • As high as it can go!
  • Improve perception
    • People
    • Service
    • Value
  • Obtain third party validation
    • GS-42 certification
Get Buy-in...Generate Excitement

- **Senior Management**
  - Build the case
    - *Health and sustainability*
    - *Quality and consistency*
    - *Value-added*
    - *Purpose & direction*
    - *Industry leadership*

- **Our Team**
  - Front-line
  - Supervisors
  - Managers
Spread Project Ownership…

- **SharePoint**
  - Assignments
  - Roles
  - Documents
  - Deadlines
A Role for Everyone…

- Leave no position behind!
- Include
- Engage
- Learn
- Improve
Leverage Learning Opportunity...

- Improve
  - Project management skills
  - Presentation skills
  - Collaboration
  - Professionalism
  - Engagement
  - Standards (carts, closets, consistency)
  - Quality & Customer Satisfaction
  - Processes
  - Knowledge
Chunk & Mix it Up…

- 25 procedures
- Four teams
- Diverse mix of supervisors
- Manager “consultant”
- Instruction:
  - Think outside of the “cart”!
  - Research
  - Collaborate
  - Negotiate
  - Decide
  - Document
  - Present
Old Problems get New Attention…

- New purpose for Website

  Visit Our New Customer-Focus Web Site!

- Objective ‘Yardstick’ Measuring the Quality of Clean!

- Promote our Value View a sample manual »

- Improve Planning for Special Events
Old Problems get New Attention…
Focus on the Front-line…

First to learn:

- Significance of role
  - *Cleaning for health!*
- Science of green cleaning
  - *Disinfecting vs sanitizing*
- Stewardship
  - *Prolonging the life of capital assets*
- Sustainability
  - *Microfiber vs paper toweling*
- Suggestions
  - *Formalize: faster, better, safer*
- Standards
  - *Do’s & Don’ts for carts and closets*
Leverage Knowledge…

- **Top Performer six-week course**
  - Enhance competencies

- **Individual GS-42 certification**
  - Assessment & validation
  - Have fun: “Green Clean Jeopardy!”

- **Train-the-Trainer**
  - Students become the SME’s!

- **APPA quality standards**
  - Objectivity
  - Root Cause Analysis
  - CAP
### THIS IS GREEN CLEANING JEOPARDY!

<table>
<thead>
<tr>
<th>Custodial Carts &amp; Closets</th>
<th>Products/Tools</th>
<th>Powered Equipment</th>
<th>Floors</th>
<th>General</th>
</tr>
</thead>
<tbody>
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Share Our Story…

- Enhanced:
  - Stature and importance
  - Pride in professionalism
  - Industry knowledge
    - *Science, products, procedures, tools*
  - Engagement
  - Confidence
  - Leadership
  - Drive
    - *Be more, do more, improve more*
UVa Building Services:

“We provide services with your health, safety and the environment in mind.”

Spring 2015
Green Seal Background

- 501 (c)(3) science-based non-profit founded in 1989
- Environmental mission with exclusive focus on products, services, purchasing, operations
- Encompass nearly 400 product & service categories
- Utilize a multiple criteria / life cycle approach
- No financial interest in certified products/services or in any manufacturer or company
## RPN’s Responsible Purchasing Trends Report

### Most Utilized and Recognized Standards

<table>
<thead>
<tr>
<th>Standard</th>
<th>Recognized/Utilized</th>
</tr>
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<tbody>
<tr>
<td>Energy Star</td>
<td>100% / 94%</td>
</tr>
<tr>
<td>LEED</td>
<td>91% / 70%</td>
</tr>
<tr>
<td><strong>Green Seal</strong></td>
<td>90% / 66%</td>
</tr>
<tr>
<td>EPEAT</td>
<td>81% / 61%</td>
</tr>
<tr>
<td>FSC (Forest Stewardship Council)</td>
<td>76% / 46%</td>
</tr>
<tr>
<td>EcoLogo (Environmental Choice)</td>
<td>87% / 46%</td>
</tr>
<tr>
<td>Chlorine-Free</td>
<td>90% / 45%</td>
</tr>
<tr>
<td>EnergyGuide</td>
<td>77% / 36%</td>
</tr>
<tr>
<td>GreenGuard</td>
<td>71% / 29%</td>
</tr>
<tr>
<td>USDA Organic</td>
<td>76% / 28%</td>
</tr>
<tr>
<td>Fair Trade Certified</td>
<td>72% / 28%</td>
</tr>
<tr>
<td>CRI Green Label</td>
<td>58% / 23%</td>
</tr>
<tr>
<td>C2C (Cradle-to-cradle)</td>
<td>70% / 20%</td>
</tr>
<tr>
<td>SFI (Sustainable Forest Institute)</td>
<td>59% / 19%</td>
</tr>
<tr>
<td>Green-e</td>
<td>51% / 19%</td>
</tr>
<tr>
<td>SCS (Scientific Certification Systems)</td>
<td>47% / 15%</td>
</tr>
<tr>
<td>DFE (Design for Environment)</td>
<td>61% / 15%</td>
</tr>
<tr>
<td>WaterSense</td>
<td>48% / 9%</td>
</tr>
</tbody>
</table>

### Recognized/Used Standards, Eco-labels & Certifications

<table>
<thead>
<tr>
<th>Standard/Certification</th>
<th>Recognized / Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENERGY STAR</td>
<td>99% / 94%</td>
</tr>
<tr>
<td>LEED</td>
<td>97% / 85%</td>
</tr>
<tr>
<td><strong>Green Seal</strong></td>
<td>95% / 76%</td>
</tr>
<tr>
<td>EPEAT</td>
<td>89% / 69%</td>
</tr>
<tr>
<td>EcoLogo (Environmental Choice)</td>
<td>88% / 55%</td>
</tr>
<tr>
<td>Fair Trade Certified</td>
<td>88% / 36%</td>
</tr>
<tr>
<td>USDA Organic</td>
<td>86% / 46%</td>
</tr>
<tr>
<td>FSC (Forest Stewardship Council)</td>
<td>84% / 62%</td>
</tr>
<tr>
<td>EnergyGuide</td>
<td>79% / 51%</td>
</tr>
<tr>
<td>CRI Green Label</td>
<td>78% / 42%</td>
</tr>
<tr>
<td>CFPA (Chlorine-Free Products Association)</td>
<td>76% / 32%</td>
</tr>
<tr>
<td>GreenGuard</td>
<td>70% / 37%</td>
</tr>
<tr>
<td>C2C (Cradle-to-cradle)</td>
<td>66% / 15%</td>
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<tr>
<td>SFI (Sustainable Forestry Initiative)</td>
<td>64% / 22%</td>
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<tr>
<td>DFE (Design for Environment)</td>
<td>62% / 27%</td>
</tr>
<tr>
<td>Green-e</td>
<td>58% / 20%</td>
</tr>
<tr>
<td>WaterSense</td>
<td>57% / 21%</td>
</tr>
<tr>
<td>Rainforest Alliance Certification*</td>
<td>56% / 11%</td>
</tr>
<tr>
<td>SCS (Scientific Certification Systems)</td>
<td>48% / 13%</td>
</tr>
<tr>
<td>MSC (Marine Stewardship Council)*</td>
<td>45% / 9%</td>
</tr>
<tr>
<td>Level (from BIFMA, Business and Institutional Furniture Manufacturer’s Association)*</td>
<td>40% / 9%</td>
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</tbody>
</table>
Official definition of Green Cleaning:

“CLEANING FOR HEALTH WHILE PROTECTING THE ENVIRONMENT”
Green Cleaning? What is it?

Cleaning *solely* for appearance is no longer enough!
So what *are* the benefits?

Benefits of a green cleaning program include:

- Protecting Human Health
- Protecting Environmental Health
- Improving Performance
- Increasing ROI

Resource Conservation + Health & Wellness = Sustainability
Protecting Human Health

Studies by the U.S. EPA and Cornell Medical College reveal that high-performance green and healthy cleaning results in the following health benefits:

- 52% reduction in airborne dust
- 59% decrease in Volatile Organic Compounds (VOC’s)
- 40% reduction in bacteria
- Fungi colony-forming units decreased by 61%

Indoor Environment Characterization Of A Non-Problem Building: Assessment of Cleaning Effectiveness, US Environmental Protection Agency., March 1994
Another study examined the *health benefits of improved green cleaning programs at a school*. Results attributed to cleaning practices and indoor air quality programs indicated that:

- total illnesses were reduced by 24%
- doctor visits reduced by 34%
- courses of antibiotics reduced by 24%
- days absent reduced by 46% (1)

Benefits of a green cleaning program include:

- Protecting Human Health
- Protecting Environmental Health
- Improving Performance
- Increasing ROI
Improving Performance

As stated by Frumkin, Geller, Rubin and Nodvin in *Safe and Healthy School Environments*:

“A safe and healthy school environment does more than benefit student health, it also *improves academic performance and morale*. It does more than protect students, it also safeguards faculty and staff.”
Improving Performance

Expert Dr. Michael A. Berry, PhD (citing the Charles E. Young study)

“There is a direct connection between healthy school environments; behaviors and attitudes of students, parents, and educators; and academic achievement.” (1)

Improving Performance

Case Study: The Charles Young Elementary School

- Charles Young Elementary School in Washington D.C. implemented green cleaning and indoor air quality programs that addressed total environmental quality.
Case Study: Remarkable Improvement

The Charles Young Elementary School

- Attendance: 89% to 93%
- Math Scores: 51% to 76%
- Reading Scores: 59% to 75%
Improving Performance

Green Cleaning enhances the performance of students, faculty and staff by:

- Diminishing school absences
- Decreased “presenteeism”
- Fewer job injuries
- Less facility damage

“Presenteeism” – productivity losses that occur when employees/students come to work/school but under-perform due to physical and psychological causes.*

*Abstract from The International Journal of Human Resource Management
So what are the benefits?

Benefits of a green cleaning program include:

- Protecting Human Health
- Protecting Environmental Health
- Improving Performance
- Increasing ROI

Resource Conservation + Health & Wellness = Sustainability
Increasing ROI

Common misperceptions of green cleaning:

- Chemicals cost more
- Expensive equipment necessary
- Labor costs increase
- Efficiencies decrease
Increasing ROI

In 2008, UNCG became the first state university to adopt the Green Seal chemicals offered on the state contract. This led to UNCG’s green cleaning program.

Before the university began its green cleaning program, the chemicals on hand cost roughly $3.07/gallon. Switching to Green Seal-certified chemicals brought the cost down to an estimated 25 cents/gallon, and reduced chemical usage by 75%.

--Ada Baldwin, Assistant Director of Housekeeping at UNC-Greensboro
“In the past, green cleaning products were more expensive, but that is not the case anymore. At a minimum the decision to use green cleaning products will be cost neutral. A strong case can be made for cost savings, but this largely depends on what one is switching from: if the current products are not purchased in concentrate form, if dilution control systems are not being utilized, if the current number of products being used is excessive and can be replaced by a smaller group of core products, etc., then a significant cost savings can be realized.”

--Jason Luke, Associate Director of Custodial Support Services at Harvard University Medical Center
Increasing ROI

- In a pilot test conducted by the Green Purchasing Institute for the State of Hawaii, two schools in Honolulu reduced the cost of their restroom cleaning products from $6-12 per gallon to less than $1 per gallon by replacing a ready-to-use conventional product with a highly-concentrated Green Seal-certified product.

- Riverside Military Academy in Gainesville, GA realized a $280,000 annual savings by replacing 20 different cleaning products with a single Green Seal-certified product to clean 270 dorm rooms and 100 bathrooms.

- The Portland, OR municipal transit agency, experienced a substantial cost savings when it switched to certified “green” cleaners, reducing the number of products it used from 22 to 4. “Initial cleaning chemical cost savings to the municipality amounted to 70%, not including training cost savings associated with the inventory simplification.”

- Harvard University Medical School reported saving $11,700 a year when it switched to green cleaning products by reducing the number of products they used.
Increasing ROI

- After the Palm Beach County School District (Florida) saved over $500 in one school during a three-month pilot project, it began phasing in green cleaning to all of its 180 schools in June 2008, with a projected annual district-wide savings of $360,000. (1)

- Northern Tioga County School District (Pennsylvania) saved nearly $20,000 in one year by eliminating aerosols and other hazardous cleaning products. “Ounce for ounce, aerosols often are more expensive than other cleaning solutions and emit harmful fumes that are inhaled by building occupants.” (1)

- A 2003-2004 pilot project led by the Healthy Schools Campaign to introduce green cleaning into the Chicago Public School District revealed that the price of Green Seal-certified products was cost-competitive with traditional products. (2)


2009 San Francisco study of 373 cleaners found that ready-to-use (RTU) products have significantly higher costs than dilutable concentrates.

- **Cost of RTU products was 15 times higher**, on average, than concentrated products.
- **Cost of aerosol products averaged 27 times greater** than concentrate prices.

Just as with food, the cost of buying individual servings versus larger/bulk sizes carries a significant cost for “convenience.” There is also additional storage requirements for RTU bottles, a larger number of empty plastic bottles, additional transportation impacts and expenses (e.g., fuel surcharges, cardboard shipping cartons, diesel fuel consumption and exhaust, etc.) and RTU products have a high cost to schools and the environment.

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**The Real Costs of Institutional “Green” Cleaning**

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**Executive Summary**

The purpose of this study was to get more objective information on the relative costs of environmentally preferable (“green”) cleaning products relative to conventional cleaning products. Existing literature on the subject showed institutional-grade green cleaning products as cost competitive or slightly more expensive than their conventional counterparts. The literature shows that green cleaning practices offer opportunities for cost savings, for example, through reduced use of water and chemicals use, safer work environments, and reduced need to lift heavy buckets. In 2009, we surveyed the prices of 373 cleaning products from 26 manufacturer across 8 product categories. The prices of green products were not significantly different from those of equivalent conventional products, with the exception of floor strippers, where conventional products were more expensive. In general, green products averaged somewhat cheaper than conventional, with the exception of glass cleaners. As expected, products sold as aerosols or as ready-to-use (RTU) products were significantly more expensive than the equivalent concentrates. RTU products averaged 15 times more expensive and aerosols averaged 27 times more expensive. Because most third-party certified green products are sold as institutional-grade concentrates, businesses currently using consumer-grade products should consider switching to green institutional products to both save money and improve their environmental profile.

**Introduction**

“Green cleaning” generally refers to the use of products and services that have a “lessor or reduced impact on human health and the environment when compared with competing products or services that serve the same purpose” [1]. While proponents point to the beneficial qualities of green cleaning programs, skeptics sometimes cite product performance and cost-effectiveness as obstacles. This report aims to investigate the notion that switching to institutional-grade green cleaning programs can be cost-neutral by providing a broad comparison and analysis of both the direct and the intangible costs associated with green cleaning products.

President Clinton introduced the concept of green cleaning to the mainstream in the form of a 1993 executive order – later reauthorized in 1998 – for environmentally preferable purchasing (EPP) by federal agencies [2]. States, counties, cities, and school districts have begun to follow suit. In 2006, New York State became the first state to mandate green cleaning programs in public schools, followed by Illinois in...
Increasing ROI

Charlotte-Mecklenburg Schools (NC)

• “...As a result of using Staples’ Sustainable Earth products and consolidating to three cleaning [from 12] solutions across 170 schools, CMS has reduced cleaning supply costs by 20 percent, with over $30,000 saved in the first year alone. In addition, the increased accuracy of product dilution methods has allowed CMS to dramatically reduce chemical waste....”

Charlotte-Mecklenburg Schools Environmental Stewardship Guide
(http://www.cms.k12.nc.us/cmsdepartments/construction/buildingservices/EMS/Pages/CMSENVIRONMENTALSTEWARDSHIPGUIDE.aspx)
Increasing ROI

Hidden Savings:

- The average custodian uses five gallons of hazardous chemicals each year. He/she is exposed to these chemicals on a daily basis.

- Over $75 million is being spent each year on medical expenses and lost time wages for custodians due to injuries relating to exposure to chemicals.

- Using safer cleaning products and an improved ventilation system has been shown to increase worker productivity by up to 5% and to save institutions nationwide $30 to $150 billion annually.
Increasing ROI after K-12

Market Differentiation:

Increased demand for sustainability among college-bound students.

➢ 68% of high school seniors say enrollment is influenced by college environmental policy – College Board

“Environmental third-party certification can have recruiting power, as students are also looking for sustainability in their chosen school; certified cleaning differentiates a college or university.”

-- Princeton Review
One of the metrics for rating the institutions is the percentage of the school’s cleaning expenditures spent on Green Seal-certified products.

More than 90% of the campuses surveyed reported using Green Seal-certified cleaning products.
Increasing ROI

• Market Differentiation

➢ Those considering pursuing LEED-EBOM will be particularly interested in green cleaning, as the USGBC’s revised LEED V4 includes a credit for using a certified cleaning service.
Purchasing green cleaning products for schools is mandated by Maryland House Bill 1019.

Howard County Public School System went beyond just products.

Their custodial service is Green Seal-certified for its equipment, practices, procedures and communications that meet the GS-42 standard.

- 74 Schools
- 51,000+ students
- 434 custodians
- $1,093,470 cleaning budget
- Ranks among Maryland’s top performing school districts
Howard County recently won the 2012 Grand Award presented by American School & University magazine, the Healthy Schools Campaign, and the Green Cleaning Network.

“Award winners demonstrate best practices around green cleaning, galvanizing their school communities around the idea that all students, faculty and staff deserve a healthy place to learn and work.”
“We’ve now raised the bar by protecting the health of our students and faculty, and by providing our staff with the knowledge and hands-on skills they need to become leaders in environmental wellness.”

--Olivia Claus, Manager, Office of Custodial Services
Howard County Public School System
“GS-42 certification for our in-house custodial operation marked a major milestone in our progress towards a more sustainable campus at Harvard. The extraordinary thoroughness of the Green Seal certification process convinced us of its legitimate value. By ingraining the rigorous requirements throughout all of cleaning activities we have changed the way our staff thinks about the term ‘sustainability’ ... from a slogan to Standard Operating Procedure. GS-42 certification has proven to be a challenge that was well worth the effort.”

--Jeffrey Smith, Director, Facilities Maintenance Operations
Harvard University
University of Maryland, College Park

“I am pleased beyond measure to accept Green Seal’s G-S 42 Certification on behalf of the University of Maryland, College Park, Department of Facilities Management. As a campus focused on, and committed to, environmentally sustainable practices, we have already been recognized as one of “America’s Greenest Campuses” and have been honored by the Princeton Review’s Green College Honor Roll, and the College Sustainability Report Card, among others. Attaining GS-42 Certification made sense as the next step in our quest to be a world class organization, and we will be proud to communicate this achievement to our students, faculty and staff.”

--Harry A. Teabout III Director, Department of Building and Landscape Services, Facilities Management
Don’t buy into or support “green washing”

Abide by the leading independent national standards

Purchase third-party certified cleaning products

Understand that green products are one element of a green cleaning program

Support training for janitorial staff

Educate your students, faculty, staff and parents about what you are doing to protect their health and the environment
Contact Information

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(202) 872-6400