Why Green Cleaning Makes 'Cents'

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There are many reasons why distribution centers, warehouses, manufacturing plants, and processing facilities can benefit from a green floor-cleaning program. From a cleaning-only perspective, green cleaning reduces the use of water and chemicals and improves the effectiveness of cleaning programs. It also directly impacts a facility's sustainability efforts by reducing energy consumption, improving indoor air quality (IAQ) and contributing to certification programs such as LEED-EBOM (Leadership in Energy and Environmental Design for Existing Buildings: Operations & Maintenance).
Certainly, stewardship of the environment is in itself a worthy objective, and it's a goal of many companies small and large. But green cleaning can also reduce the cost of operating a facility and even help extend the life of a building. The ultimate benefits for most green cleaning practitioners are environmental stewardship and economic return.

Who Is Cleaning Green?

According to a recent survey by the Material Handling Industry of America (MHIA), 79 percent of material handling and logistics managers have or are planning to institute sustainability goals for their operations1. And, at the close of 2009, 39 of the 4,286 LEED-certified projects were in food manufacturing facilities2. Green

initiative programs are the norm in many Fortune 500 companies, including Chrysler, Ford, Honda, Carrier Corp., and others.

The green movement for manufacturing and industrial sites is a natural outgrowth of what is already established in the “front office.” All warehouses have office space; over 2,000 commercial developments are certified as “sustainable” through the LEED® program (Leadership in Engineering and Environmental Design) of the U.S. Green Building Council (USGBC). Now the focus is on what’s “out back”: the warehouse, distribution, manufacturing, and processing facilities that are integral to operations.

What Is Green Cleaning?

In practice, green cleaning aims to reduce the use of chemicals, water, and energy. The goal of green cleaning is to minimize environmental and human-health impacts, while maintaining or even improving the effectiveness of cleaning programs. From an organizational standpoint, green cleaning can be a certifiable standard, a frame of reference, a best practice — and just plain common sense.

If certification is an objective, the USGBC’s Green Building Rating System is a leading standard for defining, measuring and certifying a building’s sustainability. The standard that specifically addresses green cleaning is “LEED for Existing Buildings: Operations and Maintenance (LEED-EBOM).” According to LEED, its goal is “to help building owners and managers solve building problems, improve building performance and maintain and improve this performance over time.” The 100-point LEED-EBOM rating system addresses seven specific areas: sustainable sites; water efficiency; energy and atmosphere; materials and resources; indoor environmental quality; innovation in operations; and regional priority. Green cleaning is addressed in the Indoor Environmental Quality (IEQ) section, where six of the 15 points in that section pertain to green cleaning equipment, chemicals, and policies — that’s 40 percent of the entire section and therefore an important source of points.

It’s important to note that LEED points do not judge specific products; rather, they judge how a practice meets a specific point in the program. Individual sections and points work together to make up a complete sustainable building. Even if LEED-EBOM certification is not a goal, it can be a guide toward establishing best practices for a green cleaning program.

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Greening the Bottom Line

The underlying goal of a green floor-cleaning program, whether LEED-certified or a best practices initiative, is to clean with less while improving cleaning effectiveness: fewer chemicals and pollutants and lower water and energy usage. In addition to reducing the impact of floor cleaning on the environment, cleaning with less also reduces utility costs and energy costs. Green cleaning and a larger sustainability program also help maintain and extend the life of a building. A floor that is kept

consistently clean minimizes resource consumption and waste stream contributions by extending the life of flooring and reducing time in between intensive, restorative cleaning.

Improving cleaning effectiveness generally means cleaning more efficiently, which drives down the cost to clean. Labor is generally regarded as the most significant cost factor in any floor-cleaning program. The temptation to purchase inferior chemicals and equipment can yield short-term cost-savings, but the ineffectiveness of such products can actually cost a facility more in the long run. Floor scrubbers that don’t allow the operator to make quick adjustments to the flow rate, detergent strength and scrubbing pressure, for example, will require more downtime to make adjustments for variable soil loads, spills and high-traffic areas. The importance of having the right tools for the job cannot be overstated, as the impact on the cost of labor certainly reinforces the old saying, “time is money.”

The Dual Benefits of Cleaning Green

Specifically, a green floor-cleaning program will reduce environmental impact and bottom-line costs through:

1. Less water/wastewater discharged.

Traditional floor scrubbers can be big water guzzlers. For example, a 100-gallon floor scrubber requiring three tank-fills per cleaning shift will consume 300 gallons of water and associated detergent. Yet newer floor-cleaning machines can be big water-savers. Some floor scrubbers use ultra-low-flow dispensing that cuts water usage by up to 70 percent. In addition, floor scrubbers should be flexible enough to allow the operator to choose where to apply extra water or detergent, such as in higher-traffic or spill areas. Most of the cleaning can still be done with minimal water and detergent.

2. Fewer chemicals used and discharged.

Floor-cleaning machines for scrubbing, buffing or burnishing use fewer and less toxic cleaning chemicals while still delivering superior cleaning. Automatic dispensing systems mix chemicals at the correct ratio and eliminate unused cleaning solution. To minimize chemical use, some new floor machines offer an ultra-low detergent or water-only cleaning for light, routine cleaning.

3. Improved indoor air quality.

Gel-battery-powered equipment increases safety and convenience because there is no potential for battery acid spills or noxious gas emissions during charging that can occur with conventional batteries. Powered sweeping equipment can help improve IAQ by controlling the spread of dust while sweeping.

The Importance of Measurement

A “non-green” facility will likely pay electric, gas and water bills without really

knowing what contributes to the costs. A green cleaning program is quantifiable. Simply being aware of how much water and chemicals are dispensed into the waste stream can be an incentive for reducing use. Establishing a consumption benchmark (i.e., before the program is started) and then measuring costs and contributing factors once the program is underway helps gauge success. Proper cleaning equipment and methods will significantly reduce use of these resources.

Stay tuned for part two of this article, which explains how a manufacturer can implement these technologies into a green cleaning program for their own plant.

For more information, please visit www.nilfisk-advance.com *[1].*

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