NE Assistance & Pollution Prevention Roundtable Web Conference on Green Cleaning
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Cleaning for Health
INFORM works with government agencies, schools, and businesses to facilitate business practices that are environmentally preferable.
Cleaning for Health

- 1990 – INFORM began investigating the environmental and human health effects of chemicals in commerce
- 2000 – INFORM was asked by a cleaning service to research cleaning products because of a growing body of information about the health hazards to its employees
- 2002 – INFORM published *Cleaning for Health: Products and Practices for a Safer Indoor Environment*
- 2004 – INFORM launched New England outreach program
- 2004-2007 - Visited over 100 facilities including 59 schools in 5 states
Who is Cleaning “Green”? 

- Federal agencies
- State and municipal governments
- Businesses
- Commercial cleaning services
- Colleges and universities
- Hospitals and healthcare facilities
- Public and private schools
  - New York State requires green cleaning
  - Other states are considering legislation
- Restaurants and hotels
  - Green hotel and restaurant associations
Cleaning for Health

Cleaning that protects public health, without affecting the health of staff, building occupants and the environment

Health first!
What Is Cleaning for Health?

A program that includes:

- Environmentally preferable chemicals
  - Safer, less-toxic, with third-party verification for environmentally preferable qualities

- State-of-the-art cleaning methods (commonly called “best practices”)

- Advanced technology cleaning equipment use that reduces the use of chemicals
  - Microfiber
  - High-filtration vacuums and vacuum attachments
Environmentally Preferable Cleaning Chemicals

- Less-toxic chemicals are readily available through most manufacturers and distributors.
- Third-party certification of institutional cleaning products is important to ensure quality.
- Product lists are available at organization websites.
  - Common third-party programs are:
    - Design for the Environment – EPA
    - Green Seal (GS) – US
    - Environmental Choice (EC) – Canada
Standards - Green Seal

Cleaning Products Shall:

- Not contain:
  - Carcinogens
  - Reproductive toxins
  - Skin and eye irritants
  - Skin sensitizers
- Not be combustible
- Not contribute to photochemical smog, tropospheric ozone production, or poor IAQ
- Not be toxic to aquatic life
- Be readily biodegradable
Standards - Green Seal

- Can the packaging be recycled?
- Is the product a concentrate?
- Does the product contain more than 0.5% by weight of total phosphorus?
- Are fragrances identified on the material safety data sheet?
- Is training offered on the proper use of the product?
- Does the product contain alkylphenol ethoxylates, dibutyl phthalates, or heavy metals?
Controversy

- 2002-2006 – Emerging research raises questions about some ingredients allowed in third-party certified products:
  - Asthmagens
    - Identification required for some purchasers
  - Glycol ethers
  - Hormone disruptors
  - VOC levels – 1% for all products
- Green Seal just announced it will revise GS-37
- Cost of Green Seal certification
Controversy

- Proponents of US Department of Interior standards
  - Bio-based
  - No petrochemical-derived fragrances
  - No petrochemical-derived dyes
  - Non-corrosive

- Are bio-based products environmentally preferable?
  • Lack of research to support this position
    - May be from genetically engineered feedstock
    - May use petrochemicals in the refining process
    - Pesticides may be used during plant growth
    - Require more energy during the refining process
Controversy

- Safety of certified products for children
- Children are at greater risk than adults when exposed to toxins because:
  - They are exposed at higher levels
    - Eat more food, breathe more air, drink more water
    - Play closer to the ground, hand-to-mouth activity
  - They metabolize and eliminate toxins more slowly than adults
  - Their rapidly developing systems are more sensitive
Greenwashing

- Manufacturers may claim their products:
  - Are nontoxic to humans
  - Will not harm the environment
  - Pose no threat to health
- Products need third-party certification to show they meet standardized “green” criteria
- Material safety data sheets do not give all the information and are hard to understand
Best Practices

- Adopt a protocol for the use and handling of hazardous products
- Institute a culture of looking for less-toxic products
- Use high-performance equipment
- Identify areas that need disinfecting as opposed to areas that just need cleaning
- Manage flooring maintenance with less-toxic products
- Manage the maintenance of carpeting to reduce health impacts
Minimize the Use of Disinfectants

- Separate cleaning from disinfecting!
- Determine high-risk areas
  - Areas where moisture collects
  - Bathroom fixtures
  - Bathroom doorknobs
  - Drinking fountains
  - Shower rooms
Advanced Technology Equipment

- Reduce particulates in the air and the use of more-toxic cleaning products by:
  - Installing dirt-grabbing walk-off mats inside and outside entrances (recommended 15’ long)
  - Using microfiber cloths and mops that pick up dirt while using a reduced amount of chemicals
  - Employing high-filtration vacuums, or microfiber mops instead of conventional dust mops
  - Installing high-filtration vacuum attachments on other floor-care equipment
Eight Key Steps to Successful Implementation

- Adopt a policy
- Establish an Environmental Health and Safety Committee
- Educate staff
- Evaluate your current cleaning products, methods, and equipment
- Begin with a pilot project
- Select products that work for your facility
- Monitor success
- Reward staff for participating
Case Study

- Vermont Supervisory Union
  - 6 schools
  - Superintendent driven project
  - Presented health information to principals, nurses, and custodians
  - Visited each school to evaluate current products
Case Study

- **Obstacles**
  - Slow response from vendor to carry a full line of products
  - Vendor slow to accept trade-in of conventional products for EP versions
  - No services for microfiber rentals
    - No space for washer/dryers
  - No space for dilution stations
Results

- Phase-in process
  - Working with the vendor
  - Chemicals first, then microfiber
  - Identifying services for microfiber rental
  - Educating building staff
    - Teachers

- Improved health
  - Principal with allergies notes that she “can breathe now” even when cleaning is taking place
Case Study - College

- Administration wanted to implement a Cleaning for Health program

- Reputed to be an environmental leader

- There was some resistance from the custodial staff
INFORM’s Program

- Met with the Facilities Manager
  - Performed a Cleaning Products Evaluation
    - Identified hazardous ingredients in current products
- Met with the Team Leaders
  - Presented information on health impacts
  - Listened to their concerns
  - Answered their questions
- Organized a seminar for the 100+ custodians
  - Included a panel composed of:
    - an EP cleaning products vendor
    - public school custodian using EP products
    - public school facilities manager using EP products
The Process

- Custodians are assisting in the process to identify EP products that fit the cleaning tasks required
- Phase-in process
  - Use up existing stock while trying new products
  - Implement all-purpose, bathroom, glass carpet and neutral cleaner first
  - Then move to floor care products
The Process

- Replace cotton cloths and dustmops with microfiber mops and cloths
- Replace equipment with high-filtration versions as needed
- Reward the custodians
- Educate the building occupants
Resources

- INFORM’s Resources – www.informinc.org
- Carpet and Rug Institute – www.carpet-rug.com
- EPA IAQ resources – http://www.epa.gov/iaq
- Green Seal – www.greenseal.org
- Janitorial Products Pollution Prevention Project – www.wrppn.org/Janitorial/jp4.cfm
Cleaning for Health

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