Minimizing Use of Janitorial Products

The following are examples of successful pollution prevention strategies for reducing the use of janitorial chemicals. These examples are from a series of fact sheets published on the internet by the Janitorial Products Pollution Prevention Project. Two of these fact sheets are included at the back this section of the workbook.

- Chemical Substitutions - Changing from highly-toxic to less-toxic ingredients. A number of effective, easy-to-use, and low-toxicity janitorial products are now becoming available. Because earlier "green" products did not always meet janitors' expectations, extensive product trials are usually necessary to convince skeptical users to make a change.

  Specific examples include changing from:

  Carpet shampoo with nitrilotriacetic acid to one made with ingredients that are not carcinogenic;

  Glass cleaner containing butoxyethanol to one formulated with isopropanol or non-hazardous ingredients;

  General purpose cleaner with alkyl phenyl ethoxylates, ethanolamine, or butoxyethanol to one formulated with linear alcohol ethoxylates, citric acid, or non-hazardous ingredients.

- Chemical Use Reduction - Decreasing the amounts of products with toxic ingredients that janitors use. Some cleaning tasks must use hazardous products because there are no effective substitutes. In these instances the pollution prevention message is to ask the janitor to dilute the product as much as possible, and to use it only when absolutely necessary.

  Floor finish strippers often contain ammonium hydroxide, ethanolamine, and butoxyethanol, making this product one of the most dangerous handled by janitors. Minimizing floor stripper use by 50% or more is possible by:

  Scheduling floor renewal work according to wear patterns rather than simply following a calendar;

  Diluting the stripper with as much water as possible (but not so much that the floor finish is removed unevenly);

Carefully and thoroughly applying the diluted stripper;

Using a rotating pad scrubber wherever possible; and

Thoroughly rinsing the stripped floor so as to neutralize the surface prior to applying the new floor finish.

Acid toilet bowl cleaners are another of the most hazardous janitorial products. Formulated with hydrochloric, phosphoric, or hydroxyacetic acid, these cleaners are very effective in removing hard water deposits and stubborn stains. However, this much cleaning power is not normally needed every day. Therefore a good pollution prevention strategy is to use two cleaners - a mild product for daily cleaning, and an acid cleaner that is only used when absolutely necessary. Adopting this strategy will usually decrease hazardous material use by over 80%.

- Building Perimeter Strategies - Managing the entry of dirt into the building is another way of accomplishing source reduction. Cleanable floor mats, double-door entry chambers, and positive air pressure are all very effective in preventing foot-borne dirt from entering the building in the first place. Less soil in the building means less frequent cleaning, which in turn requires less chemical use.

- Change Cleaning Process - Modifying the techniques janitors use for applying their cleaning products can accomplish source reduction. Many environmentally preferable cleaning products work best when they are applied to the surface with some force, and are left in place long enough to loosen and lift the soil that is present.

  Work sequencing therefore is important for the product to be used successfully. For example, the first thing a janitor should do in daily cleaning of a restroom is to apply mild cleaners to the sinks and toilet bowls. These cleaners should be left in place while the trash containers are emptied and paper dispensers are refilled. Then the janitor can quickly scrub and rinse the fixtures once the cleaners have been in place for a few minutes. This sequence takes no more time than cleaning the fixtures separately before removing trash and stocking paper supplies.

Other, longer-term pollution prevention strategies include designing buildings with easy-to-clean architectural features (e.g., keep carpets out of locker rooms), taking care that features with incompatible cleaning needs are kept apart from each other (e.g., not situating carpets and vinyl tiles together), and operating building air conditioning systems so as to minimize the movement of dust.

Adopted from a forthcoming article in Pollution Prevention Review by Thomas Barron and Lara Sutherland.