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Pollution Prevention & Hazardous Waste Management Tips for Printshops

Pollution Prevention

Printshops can take many actions to prevent pollution at their facilities and set examples for their industry and their communities.

Pollution prevention is any activity, including the use of materials, processes or practices, that reduces or eliminates the creation of pollutants or wastes at the source. Examples include energy or water conservation and waste reduction. Pollution prevention is a relatively new approach to environmental protection. The traditional approach is to control pollutants once they have been generated. Pollution prevention aims to minimize the impacts of contaminants and prevent generation of the waste. Results include reduced volumes of and/or reduced environmental impacts from pollution, associated cost savings, and improved worker safety.

Pollution prevention is achieved through four main practices: eliminate, reduce, reuse, and recycle.

Examples include:

- *Substitute a less hazardous raw material.* Use soy-based or other alternative inks.
- *Change a process.* Use computer-to-plate or other digital technology.
- *Modify the product.* Print on recycled paper.
- *Inventory.* Keep track of materials you buy. Use on a first-in, first-out basis to avoid accumulation of expired material.
- *Practice good housekeeping.* Label chemical and waste containers to avoid cross-contamination; ensure materials are stored in a safe area, with lids and appropriate precautions to prevent leaks and spills.
- *Reuse materials.* Employ an in-shop mixing system to make use of extra ink.
- *Recycle.* Take waste paper and aluminum plates to a recycling facility.
- *Conserve energy and water.* Utilize energy-efficient office equipment.

Hazardous Waste Management

Hazardous wastes are particularly dangerous to human health and the environment and must be disposed of in an approved manner.

The two types of hazardous waste are:

- *Characteristic Wastes:* Wastes that exhibit one or more of the four characteristics of ignitability, corrosivity, reactivity, or toxicity. Each characteristic is defined by regulation.
- *Listed Wastes:* Wastes that appear on any of four specific lists issued by the U.S. Environmental Protection Agency (EPA).

Potentially hazardous wastes found in printshops:

- Solvents
- Inks
- Fixers & developers
- Fountain solution
- Oils & lubricants
- Acids/bases
- Used chemicals
- Fluorescent light bulbs

Determining your generator status and requirements

- *List all wastes your facility generates each month.* Include paper, office products, chemical wastes, and fluorescent lighting.
- *Evaluate each waste to determine if it is hazardous.* You may be able to tell as a result of your experience and knowledge of processes and chemicals you use. Or you may need to consult the supplier, MSDS sheets, or a regulatory agency for information to assist you in evaluating your wastes. In some cases, a lab analysis may be necessary.

Generator status

Generator status is based on the type and quantity of wastes generated.

A Conditionally Exempt Small Quantity Generator (CESQG) generates:

- 220 pounds or less of hazardous waste per calendar month.
- 2.2 pounds or less of acutely hazardous waste per month.
- 220 pounds or less of spill cleanup debris containing hazardous waste per month.

A Small Quantity Generator generates:

- between 220 and 2,200 pounds of hazardous waste per month.

A Large Quantity Generator generates:

- more than 2,200 pounds of hazardous waste per month.
- more than 2.2 pounds of acutely hazardous waste per month.

Hazardous waste rules and regulations

Regulations govern the storage, transport, treatment, and disposal of hazardous waste. These rules depend on your generator status. For more information on rules specific to your generator status, visit DEQ's Web site at www.deq.state.id.us.

Best Management Practices

Regardless of generator status or regulatory requirements, good pollution prevention and best management practices help ensure wastes are properly handled. Below are general Best Management Practices. As you evaluate your own shop, you may find additional pollution prevention opportunities.

1. **Record keeping.** Keep accurate records of types and amounts of waste generated. Refer to these records to determine where waste reductions are possible.
2. **Inventory.** Utilize an efficient and appropriate inventory system for your shop to minimize wasted raw materials.
3. **Storage.** Follow the storage instructions on all materials to prevent spoilage. For chemical storage, follow appropriate regulatory guidelines, including labeling all containers, keeping lids closed, and segregating wastes.
4. **Chemicals and Materials Management.** Properly manage all chemicals. Use the least amount of solvent and cleaner possible.
5. **Planning.** Plan runs according to ink color. Run similar jobs back-to-back or run lightest to darkest colors.
6. **Substitution.** Use a less toxic solvent or alcohol-free fountain solution.
7. **Reuse.** Launder and reuse soiled rags.
8. **Recycle.** Go to DEQ's Web site for links to the Idaho Recycling Directory and *A Resource Guide for Printers*. Both contain useful information on recycling facilities and recyclable products.

For more information

Contact DEQ's pollution prevention program at (208) 373-0502 or visit our Web site at www.deq.state.id.us.