



# Printers

## Environmental Regulations



This fact sheet was compiled to highlight some of the common wastes and emissions from printers, and the most significant environmental regulations pertaining to these wastes/emissions. This sheet is merely informational and is not intended to be an exclusive source for the information about environmental requirements to which printers may be subject.

### AIR EMISSIONS

Air Emission Sources. Volatile organic compounds (VOCs) are the primary air pollutants for which printers are regulated. The main sources of VOCs for printers are inks, fountain solutions, cleaning solvents, and coating solutions.

Filing an APEN. If your shop generates more than 1 ton per year of VOCs in a non-attainment area for ozone (mainly the Denver area) or more than 2 tons per year of VOCs in any other area, you need to file an Air Pollution Emissions Notice (APEN) with the Colorado Department of Public Health and Environment's (CDPHE) Air Pollution Control Division.

To calculate your potential VOC emissions, you need to know how many gallons per year your facility uses for each product containing a significant amount of VOCs, e.g. cleaning solvents. For each of these products you also need to know how many pounds of VOCs per gallon the product contains. The VOC information should be on the MSDS or can be obtained from your supplier. Then, for each of these products, you multiply the gallons per year used by the pounds of VOC per gallon, which gives you pounds of VOC per year. You then add the pounds of VOC per year for all of your VOC-containing products to obtain the total pounds of VOC per year for your estimated emissions.

$$\text{(GALLONS/YEAR) X (POUNDS OF VOCs/GALLON) = POUNDS OF VOC PER YEAR}$$

Additional help. If you have not received an APEN form, or if you have any questions about completing this form, you can call the CDPHE Small Business Assistance Program, Nick Melliadis at (303) 692-3175.

## **HAZARDOUS WASTE**

Typical hazardous wastes for printers. Waste ink and cleaning solvents are the main wastes generated by printers that require management as hazardous wastes.

In addition, spent photo-chemical solutions and solvent-contaminated rags may be considered hazardous wastes. Photo-chemical solutions will be discussed below. Rags should be kept free of excess solvent and ink and should be laundered if possible. If they cannot be laundered and are contaminated with listed hazardous solvents (see page 3 of Colorado MSDS Fact Sheet), they must be managed as hazardous waste.

Hazardous waste requirements. If your shop always generates less than 220 pounds of hazardous waste (about half of a 55 gal. drum or less) per month, you are considered a "conditionally exempt small quantity generator" under the federal and state hazardous waste regulations. If you generate between 220 pounds and 2200 pounds per month, you are a "small quantity generator". Very few printers are large-quantity generators (generating more than 2200 pounds of hazardous waste (about five drums) per month). The requirements for the three categories of generators are summarized in the attached table.

Additional help. If you have any questions about your requirements under the Colorado Hazardous Waste Regulations, you can call the CDPHE Hazardous Materials and Waste Management Division at (303) 692-3320.

## **WASTE WATER DISCHARGES**

Liquid wastes of concern. These would include mainly spent photo-chemical solutions and any acid etchant solutions from plate processing. Inks and solvents should never be put down the drain or otherwise discharged to the sewer system.

Pre-treatment regulations. You should always obtain the permission of your local Publicly Owned Treatment Works (POTW) (sewage treatment plant) before discharging any industrial wastes to the sewer system. However, even with the permission of the POTW, it is preferable to recover the silver from photo-chemical solutions first, either on-site or through an off-site photo-chemical recycler. A list of photo-chemical recyclers is included in this information packet.

Additional help. For questions about wastewater discharges, call your local POTW or call the CDPHE Water Quality Control Division at (303) 692-3500.

## **OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) HAZARD COMMUNICATION STANDARD**

Businesses are required to provide information about chemical hazards to their employees through labels, Material Safety Data Sheets (MSDSs), and training. (See the fact sheet on MSDSs in this packet.) If you have questions about these requirements, call OSHA at (800) 755-7090.

*This fact sheet was compiled by the Colorado Department of Public Health and Environment's Pollution Prevention Program. For more information call Kirk Mills at (303)692-2977.*