

## Hazardous Waste

### WHAT IS HAZARDOUS WASTE?

Hazardous wastes are wastes that, in sufficient quantities and concentrations, pose a threat to human life, human health or the environment when improperly stored, transported, treated or disposed.

In regulating hazardous waste, Pennsylvania uses four federal lists of over 600 specific “listed” hazardous wastes. Other wastes are designated “hazardous” if they exhibit any of the following characteristics:

1. **IGNITABLE** - combustible under certain conditions (flashpoint less than 140°F)
2. **CORROSIVE** - highly acidic, alkaline and/or capable of corroding metal ( $\text{pH} \leq 2$  or  $\geq 12.5$ )
3. **REACTIVE** - unstable under normal conditions and capable of creating explosions and/or toxic fumes, gases, and vapors when mixed with water
4. **TOXIC** - harmful or fatal when ingested or absorbed

Mixtures of hazardous and nonhazardous wastes may also be regulated as hazardous (the act of mixing hazardous and nonhazardous wastes may be considered treatment requiring a permit). The hazardous waste designation does not include low-level radioactive waste, which is covered under separate state and federal rules.

### WHAT ARE SOME EXAMPLES?

Hazardous wastes include dust from some air pollution control devices, pickle liquor from the steel industry, some waste treatment sludges, industrial wastes from refining petroleum and preserving wood and degreasing solvents.

### WHO GENERATES HAZARDOUS WASTE?

Most hazardous wastes are generated by industries, including car repair shops; construction, ceramics and printing industries; and manufacturers of chemicals, paper, leather, cleaning agents, cosmetics and metals. The steel industry, through its various manufacturing and fabricating processes, accounts for over one third of the hazardous waste generated in Pennsylvania.

Industries are regulated according to the amount of hazardous waste they generate and are identified as either:

1. **LARGE QUANTITY GENERATORS** - establishments that generate 2,200 pounds or more of hazardous waste per month
2. **SMALL QUANTITY GENERATORS** - establishments that generate greater than 220 pounds, but less than 2,200 pounds of hazardous waste per month
3. **CONDITIONALLY EXEMPT SMALL QUANTITY GENERATORS** - establishments that generate no more than 220 pounds of hazardous waste per month

### HOW MUCH HAZARDOUS WASTE DO WE PRODUCE?

Industries in Pennsylvania generate about 300,000 tons of hazardous waste (excluding wastewater) annually. Overall, hazardous waste represents just a small proportion (approximately one percent) of all solid waste generated in Pennsylvania.

### HOW IS HAZARDOUS WASTE MANAGED?

Large-quantity generators must obtain a U.S. Environmental Protection Agency (EPA) identification number and report on the management of all their hazardous wastes to the Pennsylvania Department

of Environmental Protection (DEP). Hazardous waste should be managed to minimize the amount of waste that must be disposed through the following methods:

1. **SOURCE REDUCTION** - Hazardous waste generators try to minimize the amount of hazardous waste they produce. Some have accomplished this by eliminating production steps, some by introducing new technologies.
2. **RE-USE/RECYCLING/RECOVERY** - Many hazardous wastes can be recycled, re-used or recovered. Solvents, for example, can be refined and recycled. This reduces the need for waste disposal.
3. **TREATMENT** - Waste that cannot be reduced or recycled may be treated to change their chemical composition to reduce the volume of waste or make it nonhazardous.
4. **STORAGE** - Hazardous waste may be stored until it can be recycled or treated. If the storage period is longer than 90 days or the location of the storage facility is at a site other than where the waste was generated, the storage facility must have a permit.
5. **DISPOSAL** - Landfilling and Incineration

DEP regulations require waste minimization for generators of both hazardous and industrial nonhazardous wastes.

Hazardous waste transported for off-site treatment, storage or disposal must be accompanied by a Uniform Hazardous Waste Manifest - an EPA shipping form which is obtained from a source that has been approved by EPA to print and distribute the form. The manifest travels with the hazardous waste from the point of generation to the point of final disposal and is completed at each step of the journey. It identifies the type and amount of hazardous waste shipped, the generator and the permitted facility that will receive the waste. It also contains all necessary information for proper handling of the waste during shipping.

### **HOW IS IT DISPOSED OF?**

Hazardous waste, like other waste, is disposed of by landfilling or incineration. Landfilling is used only after the waste has been treated and stabilized. All hazardous waste facilities are governed by strict state regulations.

For more information, visit [www.dep.state.pa.us](http://www.dep.state.pa.us), keyword: Hazardous Waste.

*Refer to the Pennsylvania Hazardous Waste Regulation Compliance Guides: Hazardous Waste Identification (2510-BK-DEP2528) and Hazardous Waste Generator Requirements (2510-BK-DEP2504).*