



# Hazardous Waste Information

## Identification and Listing

### Rules for Identification and Listing of Hazardous Waste

The Resource Conservation and Recovery Act of 1976 (RCRA) requires the U.S. Environmental Protection Agency (EPA) to institute a national program to control hazardous waste. Specific regulations for carrying out RCRA are set forth in the Code of Federal Regulations (40 CFR Parts 260 to 265 and 122 to 124). The program becomes effective 6 months following promulgation of the regulation identifying and listing hazardous wastes (Part 261). This regulation includes a list of hazardous wastes as well as several characteristics for identifying hazardous waste.

The keystone of the program is control of hazardous waste from point of generation through treatment, storage, and ultimate disposal via transportation manifests, recordkeeping, and reporting. The control system starts when those who generate, transport, treat, store, or dispose of hazardous wastes notify EPA, as required by section 3010 of RCRA. After receiving notification, EPA assigns an identification number to the notifier. Anyone engaged in transporting, treating, storing, or disposing of hazardous waste who does not notify EPA during the 90-day period following promulgation of the regulation identifying hazardous wastes may not begin or continue operation after the effective date of the regulations without obtaining an EPA identification number.

The identification regulation promulgated under section 3001, Subtitle C, of RCRA (40 CFR Part 261) defines and lists solid wastes which are hazardous wastes and thus are subject to RCRA controls. In addition, the regulation establishes criteria for identifying characteristics and for listing hazardous waste. The regulation also delineates several wastes that are excluded from all or part of the RCRA regulatory control system. The regulations of 40 CFR Part 260 provide procedures for exempting wastes that are listed; and procedures for petitioning EPA to modify hazardous waste characteristics or the list.

The list and the characteristics are to be used by persons who generate, transport, treat, store, or dispose of solid waste to determine if the waste they handle is hazardous. EPA has determined that the listed wastes are hazardous. The responsibility for identifying a hazardous waste because of its characteristics rests primarily with the generator; however, other persons handling the waste also have an obligation to know if a waste they are managing is hazardous.

Once a solid waste is identified as hazardous, it is subject to all of the controls under Subtitle C--Hazardous Waste--of RCRA, except where otherwise provided. Special requirements apply to hazardous wastes generated by small-quantity generators and to hazardous wastes that are used, reused, recycled, or reclaimed.

## Definition of Hazardous Waste

RCRA defines a hazardous waste in general as a solid waste that may cause increased mortality or serious illness, or may cause substantial hazard to health or the environment when improperly managed. EPA was required to establish criteria for a more specific identification and for listing hazardous wastes. The criteria established under the Act were then used to develop characteristics and a list of hazardous wastes.

Characteristics of Hazardous Waste. Hazardous wastes are identified on the basis of measurable characteristics for which standardized tests are available. The identification regulation provides detailed technical specifications for four characteristics adopted by EPA:

- ignitability—posing a fire hazard during routine management
- corrosivity—ability to corrode standard containers, or to dissolve toxic components of other wastes
- reactivity—tendency to explode under normal management conditions, to react violently when mixed with water, or to generate toxic gases
- EP toxicity (as determined by a specific extraction procedure)  
--presence of certain toxic materials at levels greater than those specified in the regulation

List of Hazardous Wastes. The identification regulation contains a list of specific hazardous wastes. Included in the list are wastes that possess any of the four hazardous waste characteristics as well as wastes meeting the criteria for acute hazardousness or toxicity.

The criterion for acute hazardousness permits EPA to list a hazardous waste if it has been found to be fatal to humans or has been shown to be acutely toxic in certain animal studies.

The toxicity criterion permits EPA to list a hazardous waste if it contains one or more constituents that have been found to have toxic effects on humans or other life forms unless, after consideration of the following factors, EPA determines that the waste may not cause or potentially cause "substantial" hazard to human health or the environment:

- the degree of toxicity of the toxic constituents of the waste
- the concentration of these constituents in the waste
- the potential for these constituents or their by-products to migrate from the waste into the environment
- the persistence and degradation potential of the constituents or their toxic by-products in the environment
- the potential for the constituents or their toxic by-products to bioaccumulate in ecosystems
- the plausible and possible types of improper management to which the waste may be subjected
- the quantities of the waste generated
- the record of human health and environmental damage that has resulted from past improper management of wastes containing the same toxic constituents
- other appropriate factors

## Identifying a Hazardous Waste

The generator must determine if:

- the material is a solid waste; and
- the waste or any constituent is included in the hazardous waste list, or
- the waste meets any of the hazardous waste characteristics

## Exemption or Delisting

It is possible for the generator to get an exemption from regulation even if the waste is listed in the regulation. The regulation (40 CFR Part 260) includes delisting procedures for generators to follow who believe their facility's individual waste is fundamentally different from the waste listed. The generator must demonstrate, or reference test data that demonstrate, that the specific waste does not meet the criteria which caused the Agency to list the waste. This provision reflects recognition that individual waste streams vary depending upon raw materials, industrial processes, and other factors.

## Small Generators

The regulation provides for the exemption of small generators from these initial hazardous waste controls. In general, facilities generating or accumulating less than 1,000 kilograms per month of an identified hazardous waste are exempted; however, EPA has specified lower generation limits for certain acutely hazardous wastes. To enjoy this exemption, however, small generators must dispose of their hazardous waste in approved Subtitle C hazardous waste management facilities or in facilities approved by a State to manage municipal or industrial solid waste. Small generators should refer directly to the regulation to determine the applicability of the exemption to their wastes.

EPA intends to expand the coverage of small generators over a 2- to 5-year period. This will be accomplished through amendments to the regulation.

## Excluded Wastes

Certain wastes are not subject to RCRA hazardous waste controls (but may be controlled under other laws). These include:

- domestic sewage
- industrial wastewater discharges
- nuclear wastes regulated under the Atomic Energy Act
- irrigation return flows
- household waste
- wastes that are reused or recycled, except for the storage and transportation of sludges and listed wastes
- agricultural wastes returned to the soil as fertilizers or soil conditioners
- mining overburden returned to the mine site
- utility wastes (fly ash, FGD sludge, bottom ash)
- oil and gas drilling muds and brines