

FACT FLASH

6: Resource Conservation and Recovery Act (RCRA)

Liquids, solids, sludges — wastes come in these forms and many more. Wastes may be materials left over from manufacturing, like bits of metal and plastic, dirty or used chemicals, or scraps. Waste can also be things we throw away in our homes, like newspapers, food, plastic wrappers, old cleaning fluids, and disposable razors. Whatever form waste takes, we have to manage and dispose of it properly to protect our health and the environment.

What is RCRA?

In 1976 Congress passed a law that requires careful disposal of household, municipal, and commercial and industrial waste: the **Resource Conservation and Recovery Act (RCRA)**. Its goals are to:

- Conserve energy and natural resources
- Reduce the amount of waste generated
- Ensure that wastes are managed to protect human health and the environment.

RCRA gives EPA the power to make and enforce regulations for managing many kinds of waste. RCRA also allows states and Indian Tribes to have their own solid waste and hazardous waste programs in place of the Federal program, as long as their programs are at least as strong. If people and companies don't follow the regulations they can be fined or jailed.

RCRA regulations apply to three basic kinds of waste management: municipal solid waste landfills; hazardous waste generators and treatment, storage, and disposal facilities; and underground tanks storing hazardous materials.

What is municipal solid waste?

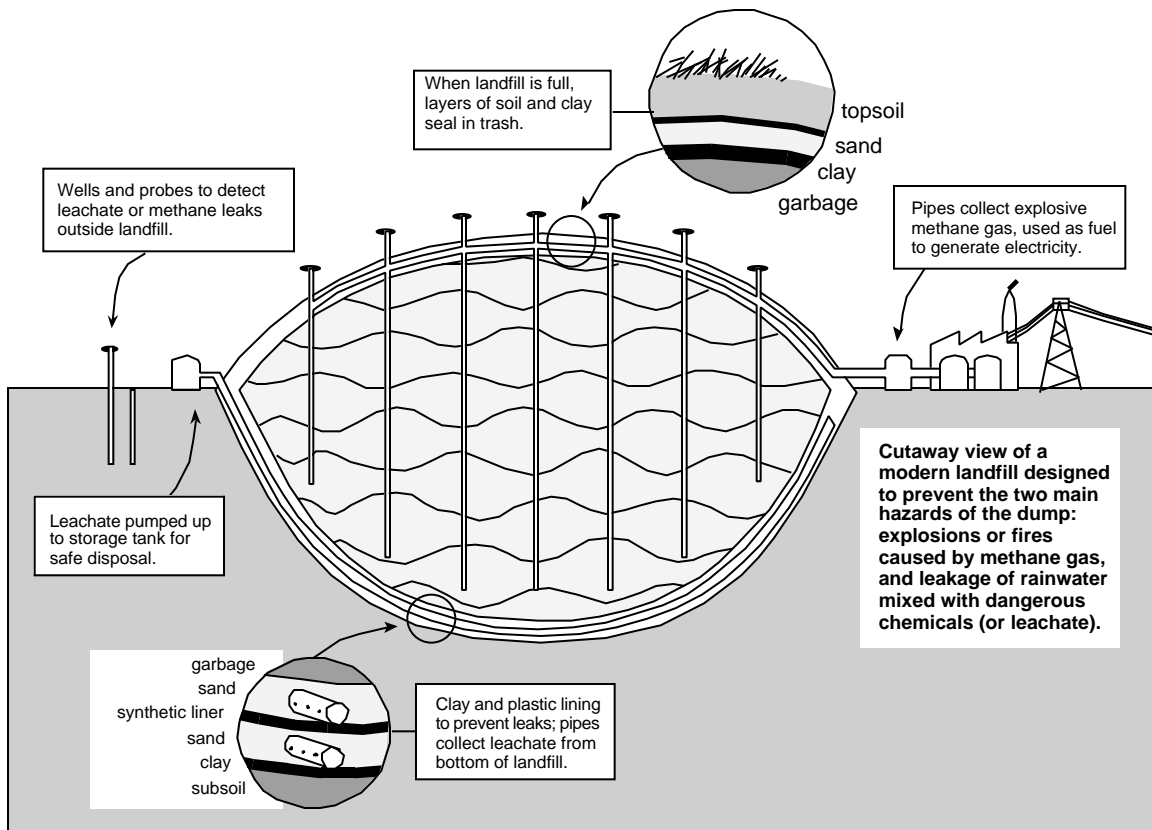
Municipal solid waste (MSW) is mostly nonhazardous garbage from businesses and homes. Many communities face the problem of more and more garbage being thrown away, with less and less space to dispose of it. Did you know every year in the United States we dispose of...

1 billion foil-lined fruit juice boxes
2 billion used batteries
25 billion styrofoam cups
700,000 old TVs
1.6 billion disposable pens
700,000 junked cars
2 billion disposable razors
15 million tons of food
16 billion disposable diapers



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Diagram 1
Example of a Properly Closed Landfill



By 2000, we are expected to produce over 220 million tons of garbage a year. Currently, there are about 36,000 municipal solid waste landfills in the United States. As we continue to produce more garbage, landfills are filling up and it is getting harder for communities to agree on where to put new landfills. While people may know that new landfills are needed, not many want them in their neighborhood. Landfills are also expensive to build.

How is MSW disposed of?

This garbage is usually disposed of in municipal solid waste landfills, placed in or on the land surface. If they are designed and operated right, landfills are lined to prevent leaks and have systems to collect leachate, potentially contaminated rainwater and other liquids

that flow over the site and filter down through the landfill. Most landfills separate different types of waste in the landfill to prevent contact between incompatible wastes.

EPA regulations set minimum standards that municipal solid waste landfills must meet. These standards reduce the chance that landfills will cause pollution, specifying where landfills can be safely located, how they should be managed, and what must be done to clean up groundwater if it is contaminated. The regulations even require the landfill and surrounding areas to be monitored after it is filled up so that any problems can be found and fixed (Diagram 1). Landfills that don't meet these standards have to close or upgrade their operations to avoid legal action and penalties.

What is hazardous waste?

Hazardous waste is most often a by-product of a manufacturing process – material left after products are made. Some hazardous wastes come from our homes: our garbage can include such hazardous wastes as old batteries, bug spray cans, and paint thinner. About 250 million tons of hazardous waste are generated every year in this country. About 80 percent of this waste is disposed of on the land.

How does RCRA regulate hazardous waste?

EPA determines which wastes are hazardous. This is an ongoing process involving new research, tests, and health concerns. EPA's regulations make sure hazardous waste is managed safely from the moment it is generated until it is disposed. This "cradle to grave" approach has three key steps.

First, the person who creates the hazardous waste must keep track of it when it is moved from where it is produced. The tracking system requires the generator of the waste to package and label it properly for transportation. A manifest (list of cargo) travels with any transported hazardous waste, from the place it is produced to the place it is finally disposed of. This helps transporters and health and safety officials rapidly identify the waste and its hazards. About 12 million tons of hazardous waste are transported each year for treatment, storage, or disposal.

Second, hazardous waste management sites, such as hazardous waste landfills or incinerators, must meet many safety standards to get a permit to accept hazardous waste for treatment or

disposal. For example, hazardous waste landfills are required to have liner systems to prevent leaks. Treatment facilities use different processes to recover material from the waste for reuse, to change the waste to make it less hazardous, or to reduce the volume of the waste.

Third, disposal of many hazardous wastes is not allowed unless the waste is treated to make it less hazardous.

Who is affected by RCRA?

Anyone who is involved in making or dealing with hazardous waste is affected by RCRA. The people who create, or generate hazardous waste, transport it, store it, treat it, and dispose of it all must follow many rules and requirements. Although most of the hazardous waste produced in the United States comes from a relatively small number of very large companies, companies that produce only small quantities of hazardous waste—such as auto repair shops, laboratories, printers, laundries, and drycleaners—are also regulated. Treating and disposing of hazardous waste is expensive and carries with it serious legal responsibilities.

What is an underground storage tank?

An underground storage tank is a large metal or fiberglass container designed to be buried in the ground and store liquid chemicals and other materials. The practice of burying tanks for underground storage was adopted to reduce the dangers of fire, explosion, weathering, and accident (such as hitting a tank with a car). There are about 1.5 million underground storage tanks (USTs) in the United States that contain hazardous

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substances or petroleum products (not counting farm and heating oil tanks). Of these, nearly 25 percent are leaking now or will leak in the future.

How does RCRA regulate USTs?

Unfortunately, there are problems with storing hazardous substances in the ground. Over time tanks rust, crack, and leak, and the equipment (pipes, pumps, and gauges) that connect tanks to the surface of the ground can fail as well. Groundwater can be contaminated by both accidental releases and the slow seepage of chemicals from buried storage tanks. To prevent leaks from tank corrosion, RCRA regulates how new tanks are built, including special rust protection. Tank owners must also show they can pay to clean up a leak if one occurs, and can compensate people who are injured or whose property is damaged because of the leak.

How does EPA enforce the RCRA regulations?

Individuals and companies that do not comply with RCRA regulations can face legal penalties. These penalties can be imposed by EPA or by a state. For minor violations, EPA or a state may simply tell a facility that it is not complying with the rules and that legal action will be taken if the owner does not comply within a certain period. For severe violations or in cases where the same violation has been repeated, a facility may face fines of up to \$25,000 for every day past the deadline that it fails to comply. The

facility's operations can also be suspended, or the operators can face criminal charges in court. Possible violations include falsifying information on a manifest, transporting waste without a manifest, or transporting waste to a facility that isn't operating legally.

How does RCRA encourage waste reduction?

RCRA has **source reduction** and **recycling** programs to reduce the amount of wastes discarded. Larger hazardous waste generators must certify that they have taken steps to reduce how much waste they produce. Often, waste reduction can help industry by cutting the costs of waste management. Recycling is also important in reducing waste. EPA has a national program to increase recycling of paper, glass, steel, plastics, and aluminum. At least 35 states have adopted some form of mandatory recycling.

How does RCRA encourage public participation?

RCRA provides on-going opportunities for public involvement in all facets of the program. RCRA allows citizens to take legal action against a person or company not complying with the regulations, or against EPA or a state for not properly enforcing the rules.

In addition, citizens are given the opportunity to voice their concerns about new rules and new facilities seeking a permit to operate in their community.