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Solid Waste and Emergency Response



Land Disposal Restrictions for Hazardous Wastes



**A Snapshot of
the Program**



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The mission of the U.S. Environmental Protection Agency (EPA) is to protect human health and the environment—air, water, and land. One way EPA fulfills this mission is by regulating the management and disposal of hazardous wastes under a law known as the Resource Conservation and Recovery Act (RCRA).

Congress passed RCRA in 1976 to ensure hazardous waste is safely managed from generation to disposal. In 1984, Congress updated RCRA by prohibiting land disposal of certain hazardous wastes, and, as a result, EPA developed the Land Disposal Restrictions (LDR) program. The LDR program requires that protective treatment standards must be met before hazardous waste is land disposed. This brochure provides a brief introduction to the LDR requirements and identifies sources of more information.

What Is Land Disposal?

Currently, about 23 million tons of hazardous waste are land disposed each year. Land disposal can be either in or on the ground—in a landfill, injection well, or other land-based unit.

Even though landfill units are equipped with safeguards, when hazardous waste is not properly treated before land disposal, it can contaminate groundwater. Rain can penetrate and pass through hazardous waste and can leach out and carry hazardous chemicals into the groundwater.

What Is the LDR Program?

The LDR program ensures that land disposed hazardous waste does not pose a threat to human health and the environment. EPA accomplishes this by setting treatment standards for all hazardous waste bound for land disposal. These treatment standards ensure hazardous waste is properly treated to destroy or immobilize hazardous chemical components before it is land disposed.

What Are the Program's Major Components?

The LDR program has three major components, which address hazardous waste disposal, dilution, and storage.

The Disposal Prohibition states that, before a hazardous waste can be land disposed, treatment standards specific to that waste material must be met. A facility may meet such standards by either:

- Treating hazardous chemical constituents in the waste to meet required treatment levels. Any method of treatment can be used to bring concentrations to the appropriate level except dilution.

OR

- Treating hazardous waste using a treatment technology specified by EPA. Once the waste is treated with the technology required under LDR, it can be land disposed.



The Dilution Prohibition states that waste must be properly treated and not simply diluted in concentration by adding large amounts of water, soil, or non-hazardous waste. Dilution does not reduce the toxicity of the hazardous constituents.

The Storage Prohibition states that waste must be treated and cannot be stored indefinitely. This prevents generators and treatment, storage, and disposal facilities from storing hazardous waste for long periods to avoid treatment. Waste may be stored, subject to the LDR, in tanks, containers, or containment buildings—but only for the purpose of accumulating quantities necessary to facilitate proper recovery, treatment, or disposal.

When Do the Restrictions Apply?

As soon as a hazardous waste is generated, it is subject to the three LDR prohibitions described above, unless the waste generated is at concentrations already below the LDR treatment standards. If a business generates hazardous wastes that are above the LDR treatment standards, it must either treat the wastes on site

before having them disposed of, or send them off site for proper treatment and ultimate disposal. If the hazardous waste meets the LDR treatment standards, further treatment is not necessary prior to disposal. A generator must always inform the receiving treatment, storage, and

disposal facility of the status of the hazardous waste and ensure that it is handled safely.

Who Is Impacted by the LDR Program?

The LDR program impacts many small and large businesses that generate, store, transport, treat, and dispose of hazardous waste. If a business or service produces more than 220 pounds of hazardous waste (or 2.2 pounds of acutely hazardous waste) in a calendar month, it must properly identify the waste and determine if it has to be treated before land disposal. The LDR program also requires all treatment, storage, and disposal facilities to follow strict standards when managing the hazardous waste they receive.



For More Information

For more information on the LDR program, treatment standards or technologies, or on the RCRA program in general, call the RCRA Hotline at 800 424-9346 or TDD (hearing impaired) 800 553-7672. In the Washington, DC, area, call 703 412-9810 or TDD 703 412-3323. You also can find more information on EPA's Web site at www.epa.gov/epaoswer/hazwaste/ldr.

What Is Hazardous Waste?

The U.S. Environmental Protection Agency (EPA) uses the term “hazardous waste” to identify wastes that could be harmful to human health and the environment. The Resource Conservation and Recovery Act (RCRA) regulates waste as “hazardous” if it meets the RCRA definition of solid waste (see box) **and** is specifically listed as hazardous **or** exhibits a characteristic of hazardous waste.

What Is “Solid Waste”?

Solid waste is discarded material including garbage, refuse, and sludge, and can be solid, semisolid, liquid, or contain gaseous materials.

Listed Wastes

A solid waste is regulated as hazardous if it is included on specific EPA lists:

- Wastes from specific industry sectors, such as certain petroleum refining wastes.
- Wastes from general industrial processes, such as spent solvents used for cleaning or degreasing.
- Discarded chemicals that are threatening to human health in low doses, even when managed properly.

Characteristic Wastes

A solid waste also is regulated as hazardous if it exhibits one or more of the following characteristics: catches fire readily, corrodes steel, explodes readily, or has toxic constituents.

Exclusions

Some wastes that meet the RCRA definitions of solid and hazardous wastes are specifically excluded or exempted from the hazardous waste regulations. For example, some oil and gas exploration and mining wastes are excluded, as are some hazardous wastes that have been recycled.