



# Hazardous Waste Management – Selected RCRA Regulations Fact Sheet

## REGULATORY SUMMARY

The regulations established under the Resource Conservation and Recovery Act (RCRA) address certain chemically-contaminated wastes that are created through the normal course of business. These requirements ensure that hazardous wastes are managed properly from the time they are created until the time they are recycled, disposed, or treated to make them safe for the environment. **Any small business that creates chemically-contaminated waste needs to find out whether the wastes are legally defined as “hazardous wastes,” and if they are, manage them in accordance with these regulations.** Additional regulations apply to the cleanup of spills or wastes improperly disposed of in the past.

## WHERE TO FIND HAZARDOUS WASTE REGULATIONS

**Statutory Authority:** *The Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984.*

**Regulations:** RCRA regulations are found as a subset of Subchapter I, “Solid Wastes,” 40 CFR 239 through 299. These regulations govern management of solid wastes, hazardous wastes (a subset of solid wastes), universal wastes, used oil, and waste-containing tanks. This fact sheet covers selected hazardous waste regulations. For information about universal wastes and used oil regulations, see the *Special Waste Management Regulations Fact Sheet*. The following 40 CFR sections of hazardous waste regulations are of greatest importance to small businesses.

- **Part 260** – Hazardous Waste Management System: General ;
- **Part 261** – Identification and Listing of Hazardous Waste;
- **Part 262** – Standards Applicable to Generators of Hazardous Waste.

*NOTE: States may have hazardous waste regulations that are more stringent than federal requirements.*

## LEARNING THE LINGO

**Acute hazardous waste** is waste listed by the Environmental Protection Agency (EPA) as particularly hazardous. It is found in some discarded chemical products and in some pesticide wastes.

**Generator** is any person, or facility, whose acts or processes produce hazardous waste identified or listed in 40 CFR Part 261, or whose acts or processes cause a hazardous waste to become subject to regulation.

A generator is the entity that causes a hazardous waste to be created. The act of creating hazardous waste is often referred to as “hazardous waste generation.”

**Generator Status** is the level or tier at which the generator creates or generates hazardous waste. Generator status is based on the amount of waste generated monthly or accumulates on site at any one time. Generator status determines the level of requirements with which the small business must comply. The U.S. Environmental Protection Agency (EPA) recognizes three classes of generators: Conditionally Exempt Small Quantity Generator (CESQG), Small Quantity Generator (SQG), and Large Quantity Generator (LQG).

### What About PCBs and Asbestos?

These are not included in the definition of hazardous waste but are covered by regulations under the Toxic Substances Control Act. However, PCB regulations do reference certain hazardous waste requirements, such as the use of a hazardous waste manifest for shipments.



**Hazardous Waste** is a subset of solid waste that is defined in 40 CFR Part 261. It includes wastes that are specifically listed in the regulations or that possess one or more hazardous waste characteristics. Hazardous wastes are legally designated by their associated waste codes.

There are four types of listed waste:

- F-listed (around 40 waste codes, found at 40 CFR 261.31; F027 is an acute hazardous waste);
- K-listed (over 100 waste codes, found at 40 CFR 261.32);
- P-listed (over 250 waste codes, found at 40 CFR 261.33 (e); often referred to as acute hazardous wastes); and
- U-listed (over 400 waste codes, found at 40 CFR 261.33 (f)).

Listed wastes include such things as spent solvents, industry specific wastes, and acute hazardous and toxic wastes.

In simple terms, characteristic hazardous wastes include those that are:

**Ignitable** – Liquids with flashpoint <140° F, spontaneously combustible materials, strong oxidizers, or ignitable compressed gases (e.g., gasoline);

**Corrosive** – Aqueous solutions of pH ≤ 2 or ≥ 12.5, or a liquid that corrodes steel at a specified rate (e.g., sulfuric acid);

**Reactive** – Normally unstable or explosive, reacts violently with water, or may release a toxic gas on contact with water (e.g., certain cyanide or sulfide-containing compounds); and

**Toxic** – Exceeds concentration limits for specified organic and inorganic contaminants when sample is analyzed using a specific laboratory protocol known as the Toxicity Characteristic Leaching Procedure. Common examples include lead (5 mg/L), mercury (0.2 mg/L), cadmium (1 mg/L), benzene (0.5 mg/L), and silver (5 mg/L).

There is a particular sequence of steps to follow when determining whether a waste is hazardous. See Waste Determination/Generator Status roadmap for details.

**Primary Accumulation Area** is an area designated to be the official hazardous waste storage area. It is here where the accumulation start date begins for SQGs and LQGs to determine how long the waste is kept on site.

**Satellite Accumulation Area (SAA)** is a temporary staging area for wastes that are stored at or near the point of generation. Once waste is moved from the satellite accumulation area it may only be taken to the primary accumulation area or to a treatment, storage, or disposal facility (TSDF). SAA wastes may not be moved more than once. It should also be noted that when the amount of waste at this location exceeds 55-gallons, it must be moved to the primary accumulation area, and the accumulation start date for disposal begins.

**Solid Waste** is any discarded material that is not excluded from regulation. This is a very broad definition and can include liquids, gases, and physical solids. Hazardous wastes are a subset of solid wastes.

#### The Mixture Rule

- If a non-hazardous waste is mixed with any amount of **listed** hazardous waste, the resulting mixture is a listed hazardous waste.
- If a non-hazardous waste is mixed with a **characteristic** hazardous waste; the resulting mixture is only a characteristic hazardous waste if the mixture still retains the characteristic.

However, generators are generally not allowed to mix hazardous and non-hazardous waste without a permit.

Dilution is not allowed as treatment.



**Treatment, Storage, or Disposal Facility (TSDF)** is a site that is authorized for treatment, storage, or disposal of hazardous waste. Each TSDF has a specific permit that dictates the types of wastes it can receive, as well as how each type can be stored, processed, treated, or disposed. This permit may require a commercial hazardous waste company to obtain analytical data the first time they accept a waste, even if analytical data is not needed by the generator to determine if the waste is hazardous. Certain recycling operations may be exempt from permitting.

## KEY PROVISIONS OF INTEREST TO SMALL BUSINESSES

### 1. Hazardous Waste Determination

The most fundamental obligation of a small business owner under the hazardous waste regulations is to know whether or not their business activities create hazardous waste or wastes. This is especially challenging for businesses that create hazardous waste only rarely or sporadically. If they find that their business does not have any wastes that are hazardous, then they should write down how this determination was made. Documentation will make it easier to handle inquiries from regulatory inspectors or others who have questions about how wastes are managed. Some solid waste landfills require documentation to prove that chemically contaminated waste is not hazardous waste. Whenever a new waste is created, the business owner or designee must go through the waste determination process again. This is why hazardous waste management is an ongoing responsibility even for businesses that do not presently generate any hazardous wastes. The Waste Determination/Generator Status Roadmap at the end of this fact sheet provides steps for determining if a waste is hazardous.

### 2. Determine Your Generator Status

Once the small business owner knows that their business creates hazardous waste, they will need to know how much hazardous waste is generated and how quickly, so they can determine their generator status. The quantity thresholds for each category are provided in the Waste Determination/Generator Status Roadmap.

### 3. Obtain an EPA Identification Number

SQGs and LQGs are required to notify the EPA and their state authority of their hazardous waste activities using a specific form. In turn, EPA will assign an EPA ID number to the location described on the form. The EPA ID number is used by regulators and commercial hazardous waste contractors for tracking purposes. Although CESQGs are not required by regulations to obtain an EPA ID number, many do because their commercial hazardous waste company will not pick up hazardous waste unless an EPA ID number is listed on the manifest. The EPA ID number is assigned to a property or location. If a small business relocates, they must obtain a new EPA ID number for their new location and file the necessary paperwork so that the old EPA ID number is no longer associated with their business name. In addition, if their generator status or the types of wastes generated changes, they need to re-file paperwork to notify their state authority and the EPA of these changes.

### 4. Shipping Waste Off-Site

Most small businesses will be sending their waste off-site for treatment and disposal. If they are treating or disposing of hazardous waste on-site, they may be required to have a permit, or at least to file an annual report. Regulations require that waste be sent only to a state or federally licensed TSDF or legitimate recycling facility. (See also Special Waste Management Regulations Fact Sheet.) CESQGs may also elect to send their waste to a solid waste landfill, as long as that landfill is permitted by the state to accept small quantities of hazardous waste. The small business owner needs to contact the landfill permitting authority to find out if this is allowable.

#### What is satellite accumulation?

SQGs and LQGs must meet RCRA requirements for hazardous waste temporarily stored at or near the point of generation. Containers must be: properly labeled, in good condition, compatible with the wastes being stored, and kept closed except when adding or removing waste. Once wastes are removed from satellite accumulation, there are numerous additional requirements which apply to the containers and to the location where wastes are being accumulated.



It is good to get such information in writing to demonstrate that waste is properly disposed. To avoid future clean-up liability, it may be prudent for the small business owner to ship hazardous waste only to a permitted TSDF.

## 5. Manage Waste Containers

In general, hazardous waste containers must be closed, leak-proof, in good condition, and compatible with the type of hazardous waste being stored. They must be labeled with the words “Hazardous Waste,” or other words to indicate contents. Weekly inspections are required for containers that are staged away from the point of generation awaiting pick-up or processing. There are no container management requirements for CESQGs, but the small business owner should consider adopting these as a Best Management Practice to prevent leaks, spills, and misidentification of wastes.

## 6. Preparedness and Prevention and Contingency Plans

This refers to having procedures in place in case there is a spill or emergency involving hazardous waste. Preparedness and prevention procedures are spelled out in detail for SQGs and LQGs. CESQGs are not required to meet preparedness and prevention requirements. However, it is a good idea for any small business to have emergency procedures in place to keep employees safe and get proper assistance in the event of a spill. LQGs are also required to have a written contingency plan. This is a formal, detailed emergency response plan to be executed in the event of a spill involving hazardous waste.

## 7. Train Employees

LQGs are required to have a formal training program for employees, and hazardous waste responsibilities and training requirements must be documented. SQGs are not required to have a formal training program but they must ensure that employees are familiar with proper waste handling and emergency procedures. There are no training requirements for CESQGs.

## 8. Accumulate Hazardous Waste Properly

SQGs and LQGs are required to follow specific management practices for satellite accumulation, defined as temporary staging of wastes at or near the point of generation. In general, no more than 55-gallons of hazardous waste, or one quart of acute hazardous waste, is allowed to be kept in a satellite accumulation location. Once more than that amount is accumulated, the excess must be moved to a regular accumulation area where there are increased management requirements. Two important points: 1) when calculating monthly waste generation rates, the wastes at **all locations**, whether they are satellite or regular accumulation locations, must be counted; 2) when determining the beginning of the accumulation time limit, it begins on the date when hazardous waste is moved from a satellite accumulation location to the primary accumulation area. When the transfer is made, this date, known as the **accumulation start date**, must be marked on the container. This date helps the generator ensure that they ship the waste off site within accumulation time limits specified in the regulations for SQGs and LQGs.

## 9. Hazardous Waste Shipment Oversight

Most small businesses make arrangements to have their hazardous waste picked up by a commercial hazardous waste management company. For liability reasons, as well as compliance, the small business owner should make sure that the company is sending hazardous waste to a licensed TSDF or a legitimate recycling operation. Except for CESQGs, hazardous waste shipments must be accompanied by a shipment document called a manifest. The small business owner should confirm receipt of the confirmation copy of the manifest from the receiving facility, and maintain copies of shipment paperwork for at least three years. Some CESQGs may be taking their waste to a local Clean Sweep program, which is allowed in some municipalities. Department of Transportation requirements and spill preparedness are important considerations whenever self-transporting hazardous waste.



### Summary of Key Provisions

Requirement	CESQG	SQG	LQG
Identify hazardous waste.	Yes	Yes	Yes
Count waste to determine generator status.	Yes	Yes	BMP
Send waste only to facility licensed to receive and process hazardous wastes being sent.	Yes	Yes	Yes
Obtain EPA ID number.	No <sup>1</sup>	Yes	Yes
Follow container management requirements.	BMP	Yes	Yes
Follow preparedness and prevention requirements.	BMP	Yes	Yes
Written contingency plan.	No	No	Yes
Ensure employees are familiar with proper waste handling and emergency procedures.	BMP	Yes	Not Applicable
Train employees.	No	No	Yes
Written description of hazardous waste duties.	No	No	Yes
Hazardous waste shipment oversight (e.g., follow DOT requirements, manifests, Land Ban paperwork, and more).	BMP	Yes	Yes
Satellite accumulation and primary accumulation requirements.	No	Yes	Yes
Hazardous waste accumulation time limits.	None	180 days <sup>2</sup>	90 days

**Notes:**

BMP = Best Management Practice

<sup>1</sup>May be required by commercial hazardous waste contactor.

<sup>2</sup>May be 270 days in certain circumstances. See 40 CFR 263.34.



## FIRST QUESTIONS FOR THE SMALL BUSINESS OWNER

- Did your supplier provide you a Material Safety Data Sheet (MSDS) for any of your raw materials, chemicals or products? What happens to these materials in your process? Do you end up with a contaminated material that you have to get rid of?
- Do you know how to tell if your wastes are considered “hazardous wastes” by regulators?
- About how much hazardous waste does your business create in a month?
- What happens to the hazardous waste after it is created?
- Do you have any old chemical products or chemically contaminated materials sitting around because you aren’t sure what to do with them?
- Does the company that picks up your hazardous waste provide you with any paperwork?

## WHAT TO LOOK FOR

- A large amount or wide variety of chemical products used on a routine basis.
- Chemical product inventories that appear to be out-of-date or excessive in quantity.
- Containers that are clearly not product or raw materials containers, whether labeled or not.
- Equipment that contains spaces where wastes might accumulate over time, such as in the bottom of a parts washer or separator, or in a sump.
- Solids that may be chemically-contaminated, such as disposable brushes, rags, and floor coverings.
- Chemically contaminated process water that is not directly discharged to the sanitary sewer.

## THE POLLUTION PREVENTION CONNECTION

Chemical inventory management practices and materials management planning can impact hazardous waste generator status. For example, a small business can accidentally shift to a higher generator status when a large quantity of wastes is unexpectedly generated or when certain excess commercial chemical products need to be discarded. Conversely, where a small business can reduce the amount of waste it generates, the generator status is lowered.

A small business may want to strive toward becoming a lower generator of hazardous waste (where feasible) so that less requirements impact the business (and of course, to protect the environment and worker safety). One of the benefits to being an SQG or CESQG of hazardous waste (as opposed to an LQG) is that lower generators are allowed to accumulate waste for longer periods of time before having to ship waste out. This can save the business both resources and money. (LQGs must ship waste within 90 days of first being accumulated.)

For this reason, small businesses have a big incentive for pollution prevention, including using more environmentally friendly products to reduce hazardous waste generation, purchasing and using fewer chemical products, and changing processes to allow for less waste generation.



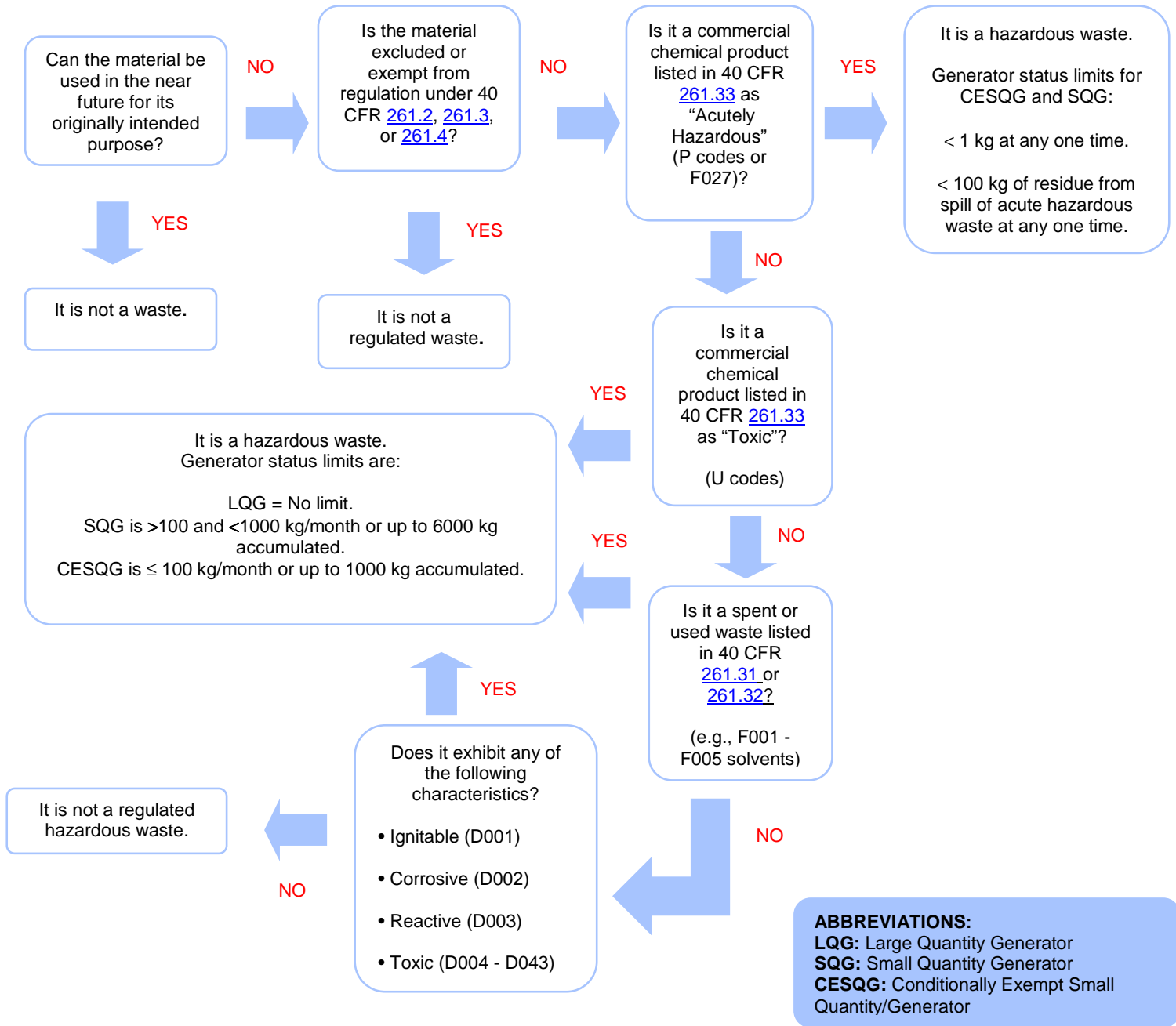
## FOR FURTHER INFO

- US EPA, December 2001, *Managing Your Hazardous Waste – A Guide for Small Businesses*, EPA530-K-01-005: <http://www.epa.gov/epaoswer/hazwaste/sqg/sqghand.htm>.
- RCRA in Focus website – providing sector specific hazardous waste guidance documents: <http://www.epa.gov/epaoswer/hazwaste/id/infocus/index.htm>.
- US EPA Small Business Division, May 2000, *Little Known but Allowable Ways to Deal with Hazardous Waste*, EPA233-B-00-002: [www.epa.gov/sbo/pdfs/hazwaste\\_500.pdf](http://www.epa.gov/sbo/pdfs/hazwaste_500.pdf)
- US EPA Small Business Division, May 2000, *Environmental Management Guide for Small Laboratories*, EPA233-B-00-01: <http://epa.gov/sbo/labguide.htm>.

This Fact Sheet provides a general overview of regulatory requirements. It is not all-inclusive and does not describe specific state and local requirements. Its purpose is to provide state SBEAP staff with guidance on key provisions so that they may recognize potential applicability to small business and be more effective when seeking interpretations from regulatory experts.



## Waste Determination / Generator Status Roadmap



**ABBREVIATIONS:**  
**LQG:** Large Quantity Generator  
**SQG:** Small Quantity Generator  
**CESQG:** Conditionally Exempt Small Quantity/Generator

**NOTES:**

- 1) Generator must determine all applicable codes.
- 2) Containers:

**Empty containers** may be handled as non-hazardous solid waste if:

- Acutely hazardous waste containers have been triple rinsed with a suitable solvent;
- Other hazardous waste containers are drained and scraped to remove as much material as possible, but leave no more than 3% of capacity, or 1 inch of residue.

**Rinsate and removed residue** must be managed according to the roadmap.

**Rinsate and removed residue** must be managed according to the roadmap.