

OVERVIEW OF STATE AND FEDERAL REGULATION OF HAZARDOUS WASTE

I. Background

In recent years, retailers and suppliers have seen the costs of unsaleables rise. One way to decrease associated costs is to ensure compliance with federal and state regulations. Of course, compliance costs money, but as many companies have seen firsthand, both state and federal regulatory agencies have increased enforcement efforts. By complying with state and federal requirements for the transportation of hazardous waste, companies can avoid violations and incidents, and the cost of the enforcement actions and administrative penalties that inevitably follow.

The Environmental Protection Agency (EPA) regulates the *handling* of hazardous waste through the Resource Conservation Recovery Act (RCRA)¹ while the Pipeline and Hazardous Materials Safety Administration (PHMSA) regulates the *transportation* of hazardous waste through the Hazardous Materials Regulations (HMR).² EPA is responsible for regulating the identification, storage, and disposal of hazardous waste, while PHMSA regulates transportation. In general, no person may offer or accept hazardous waste for transportation in commerce unless in compliance with federal and state regulations. This includes situations where retailers engage a company to transport hazardous waste to storage, treatment, or disposal facilities.

For purposes of hazardous waste handling, federal regulations classify the retailer as a “generator.” A hazardous waste generator is any person whose operation involves creating or discarding hazardous product that is no longer of use. For retailers of food, household products, and/or pharmaceuticals, this generally occurs when a shipment containing hazardous product arrives damaged or it otherwise unsaleable. For example, something as common as a leaking bottle of shampoo can be classified as a hazardous waste and must be stored, treated, and disposed of as such. To determine which regulations apply, generators must determine their generator category.³ Generator categories are determined by the total weight of hazardous waste produced in any given month of the calendar year. Generator categories are not determined by averaging the weight of waste shipped off-site. For certain conditionally exempt and small quantity generators, category may also be determined by the amount of hazardous waste accumulated on-site. Because generator status is determined on a monthly basis, it is possible that a generator’s status to change. This is referred to as episodic generation. If a generator’s status changes, the generator is required to comply with the respective regulatory requirements

¹ 42 U.S.C. § 6901 (1976).

² 49 C.F.R. Parts 100-185.

³ Conditionally exempt small quantity generators generate 100 kilograms of hazardous waste or less per month, 1 kilogram or less per month of acutely hazardous waste, or less than 100 kilograms per month of acute spill residue or soil. Small quantity generators generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month. Large quantity generators generate 1,000 kilograms per month or more of hazardous waste, more than 1 kilogram per month of acutely hazardous waste, or more than 100 kilograms per month of acute spill residue or soil.

for that class of generator.⁴ Among others, a generator's responsibilities include: 1) identifying waste; 2) proper classification; 3) obtaining an EPA ID number; 4) adhering to on-site accumulation quantity and time limitations; 5) storage; 6) manifest; 7) reporting, training, planning, and emergency procedure requirements; and 8) following HMR transport requirements.

II. Hazardous Wastes

EPA's mission – to protect human health and the environment – is expansive and so are its regulations. The regulations that govern hazardous wastes handling are no exception. EPA requires any company that produces so-called “solid waste” to determine if that waste is hazardous. EPA defines a solid waste as garbage, refuse, sludge, or other discarded materials including solids, semisolids, liquids, and contained gaseous materials. In other words, just about everything a company throws out is considered a solid waste. If a company produces garbage, its next step must be to determine if that garbage is a regulated hazardous waste.

EPA defines a waste as hazardous if: (1) it is listed as such in the RCRA regulations; (2) it exhibits any of the four hazardous characteristics, which are ignitability, corrosivity, reactivity, and toxicity; or (3) it is a mixture of a listed waste and a solid waste. Keep in mind, however, that EPA exempts certain hazardous wastes from RCRA coverage, so the company must also determine if it is dealing with an exempted hazardous waste.

If the material meets the EPA definition of a hazardous waste and is not specifically exempted from coverage, the company must handle and dispose of it in accordance with RCRA requirements.

A. Listed Wastes

Wastes known to be harmful to human health and the environment when not managed properly, regardless of their concentration, are listed as hazardous in 40 CFR Part 261, Subpart D. The four lists are categorized by letter and include F, K, P, and U.

- The F list contains hazardous wastes from certain common industrial or manufacturing processes that are products of non-specific sources.⁵
- The K list designates hazardous waste from specific industries and sources.⁶
- The P and U lists both list pure or commercial grade formulations of specific unused chemicals.⁷

In most cases, retailers of food, household products, and/or pharmaceuticals will not find the types of wastes they generate listed in 40 CFR. Therefore, retailers should direct more attention to categorizing waste based on its individual characteristics. However, states are free to list additional wastes, so to ensure compliance, retailers should refer to applicable state lists as well.

⁴ California, the District of Columbia, Kansas, Maine, Maryland, Massachusetts, Minnesota, New Hampshire, Rhode Island, and Washington all have state-specific hazardous waste generation quantity limits.

⁵ See 40 C.F.R. § 261.31.

⁶ See 40 C.F.R. § 261.32.

⁷ See 40 C.F.R. § 261.33.

B. Characteristic Wastes

If the waste is not listed as hazardous, it may still be considered a hazardous waste if it exhibits one of the following characteristics:

- **Ignitability** – Ignitable wastes exhibit characteristics that may cause fire, spontaneously combust, or have a flash point less than 60 °C (140 °F);⁸ (e.g., aerosol cans or paint)
- **Corrosivity** – Corrosive wastes are acids or bases that exhibit a pH level less than or equal to 2 or greater than or equal to 12.5, which are capable of corroding metal containers, such as storage tanks, drums, and barrels;⁹ (e.g., battery acid or rust remover)
- **Reactivity** – Reactive wastes are those which are unstable under “normal” conditions. Reactive wastes may cause explosions, toxic fumes, gases, or vapors when mixed with water;¹⁰ (e.g., bleach and other oxidizers) or
- **Toxicity** – Toxic wastes are those which are harmful or fatal when ingested or absorbed.¹¹ (e.g., contaminated foods)

It is the generators responsibility to determine whether a waste exhibits hazardous characteristics. As discussed below, identifying and characterizing hazardous waste is not always easy; however, EPA does provide tests and standards for making that determination.

C. Universal Wastes

EPA’s universal waste regulations streamline hazardous waste management standards for federally designated “universal wastes,” which include:

- batteries;
- pesticides;
- mercury-containing equipment; and
- bulbs (lamps).

The universal waste regulations provide an alternative set of regulations that reduce regulatory burden by allowing longer storage and reduced recordkeeping requirements. In general, the universal waste regulations are less stringent than RCRA requirements. However, universal waste regulations are not automatically effective in states with their own RCRA programs. This means that states are not required to adopt all federally designated universal wastes. In addition, for states that are authorized for universal waste, EPA allows states to include additional universal wastes in their state programs. For example, Florida added certain pharmaceutical waste to its universal waste regulations. To learn more about your state’s specific regulations on universal wastes, please refer to [the EPA’s state-specific universal waste regulations chart](#).

⁸ See 40 C.F.R. § 261.21.

⁹ See 40 C.F.R. § 261.22.

¹⁰ See 40 C.F.R. § 261.23.

¹¹ See 40 C.F.R. § 261.24.

III. Hazardous Waste Generators

A. Identifying Hazardous Waste

Generators of solid waste are required to determine if their wastes are hazardous. This requirement applies to all generators of solid waste, regardless of quantities produced. This means that if a retailer throws out a single piece of contaminated produce, the identification regulations apply. To determine whether a waste is hazardous and subject to regulation, the generator must first determine if the solid waste is excluded from RCRA regulation.¹² This includes wastes that otherwise fit the definition of a hazardous waste, but are specifically not regulated. Once again, it is unlikely that hazardous waste generated by food, household product, or pharmaceutical retailers will be specifically excluded from regulation by virtue of its identifying characteristics. If the waste is not excluded, the generator must determine if the waste is listed. If the waste is not listed, the generator must identify all relevant hazardous waste characteristics. Test methods for characteristics may be found in 40 CFR Part 261, Subpart C. Although generators can use the test methods referenced in Subpart C, they are not required to do so. Instead, generators may apply their own knowledge of the waste's properties to determine if it exhibits a hazardous characteristic. Once a generator determines the material meets the definition of a hazardous waste, the generator must determine the extent to which the waste is regulated.

B. On-Site Accumulation and Treatment

Further regulation requires generators to count the quantity of hazardous waste generated each month to determine their generator classification. All generators must comply with the counting requirements. In general, if a generator stores hazardous waste on-site, RCRA regulations require a permit. However, RCRA allows generators to "accumulate" hazardous waste on-site without a permit, subject not only to contingency planning, training, and technical standards, but time and quantity limitations as well. The length of time a generator may accumulate hazardous waste will vary depending on its classification. Paying careful attention to these limitations is important because noncompliant generators risk being categorized as a storage facility, which invites more stringent regulatory requirements. EPA requires the time period for generator accumulation start when waste is first placed in or on an empty accumulation unit (e.g., tank, container, drip pad, or containment building). Tanks and containers must be marked with the date accumulation begins. To avoid exceeding time limits, generators should completely empty the receptacle every 90, 180, or 270 days, as applicable, depending on quantity classification.

Generators who accumulate hazardous waste on-site may treat the waste, provided the generator complies with the accumulation requirements of 40 CFR § 262.34 and the unit-specific requirements for tanks, containers, or containment buildings. Treatment is any process that changes the physical, chemical, or biological character of a waste to make it less of an environmental threat. Treatment can neutralize the waste; recover energy or material resources from a waste; render the waste less hazardous, or make the waste safer to transport, store, or dispose. Compliance allows generators to treat hazardous waste on-site without obtaining a permit or interim status. However, some states interpret accumulation to include only storage and may require generators to obtain a permit before treating hazardous waste.

¹² See 49 C.F.R. § 261.4

C. Pre-Transport Requirements

If a generator's facility is not capable of treating hazardous waste or the generator chooses not to treat hazardous waste on-site, there are other options such as disposing of the waste at a proper RCRA facility. Disposal facilities are designed to contain the waste and prevent the release of harmful pollutants to the environment. More common hazardous waste disposal practices include disposal in a land disposal unit such as a landfill, surface impoundment, waste pile, land treatment unit, or injection well. It is important to note that land disposal is subject to the EPA's Land Disposal Restrictions Program. Before shipping hazardous waste to a treatment, storage, and disposal facility (TSDF), a generator must comply with numerous pre-transport requirements. Generators must obtain an EPA ID number, preparing a Uniform Hazardous Waste Manifest, and complying with the HMR.¹³

1. EPA ID Number

Generators must obtain an EPA ID number before treating, storing, disposing of, or transporting or offering hazardous waste for transportation. EPA ID numbers are site-specific numbers assigned to generators, transporters, and treatment, storage, or disposal facilities, and only need to be obtained once. Generators who change site-specific location should notify their state or region of the change.

2. Hazardous Waste Manifest

Generators who transport, or offer for transportation, hazardous waste for off-site treatment, storage, or disposal must prepare a Uniform Hazardous Waste Manifest. The manifest is a tracking document that reflects the chain of custody from the time the waste leaves the generator to final disposition. Each party that manages the waste must sign the manifest and retain a copy. Once the chain is complete, the receiving facility returns a signed copy to the generator. If a generator does not receive a signed copy within 45 days,¹⁴ the generator must file an exception report.

In addition, generators must designate one facility on the manifest that is permitted to handle the waste described. The generator may also designate an alternate facility in case the transporter cannot deliver the waste to the primary designated facility. Manifests are not required for on-site transportation of hazardous waste. This includes transporting hazardous waste to property that is on the same plot of land or adjacent to the land if there is a private right-of-way under the control of the owner of the properties.

3. HMR Requirements

PHMSA requires that no person offer for transportation or transport hazardous waste except in accordance with the HMR. Generators of hazardous waste that are subject to the EPA's manifest requirements must meet several additional requirements before transport, including packaging, labeling, marking, and placarding.

¹³ Conditionally exempt small quantity generators are not required to obtain an EPA ID number or comply with the manifest requirements.

¹⁴ 60 days for a small quantity generator.

As the name suggests, a packaging is the receptacle used to contain hazardous waste, as well as any other components necessary for the receptacle to perform its containment function. On the other hand, a “package” is a packaging plus its contents.

The HMR specifies what types of packagings are acceptable for hazardous waste. Packaging requirements are based on the nature of the hazardous waste. The generator is responsible for packaging hazardous wastes in accordance with the HMR. Remember, hazardous wastes may not be packaged or mixed together in the same packaging if such materials are capable of reacting with each other in a dangerous manner.

Marking, Labeling, and Placarding are all ways of easily identifying the type of hazardous waste contained within a shipment. A Marking may provide information on package handling requirements, (e.g., indicate if the package must be kept upright or away from heat), if a particular hazardous waste is enclosed, or if the hazardous waste presents a specific risk to health (e.g., an inhalation hazard). It may also provide a descriptive name or UN identification number for the product. Markings should be in English and not obscured by other markings or labels. Once again, depending on the waste, there may or may not be additional requirements. Marking requirements are found in 49 CFR Part 172, Subpart D.

A Label is basically a tag on covered packagings that identifies the hazardous waste contained within the package and certain additional instructions, such as whether it can only be transported on cargo aircraft and not passenger aircraft. Most packages require a label, as per 49 CFR Section 172.400. Generators should be aware of the labeling exceptions in 49 CFR § 172.400(a) and prohibitions in 49 CFR § 172.401.

Like the Label, a Placard also identifies that hazardous waste is contained within the package, except that it is affixed to a vehicle or rail car transporting the packaging, a bulk packaging, a freight container, or a unit load device. In general, a transport vehicle must be placarded on each side and each end with the proper placard specified in 49 CFR § 172.504 Tables 1 and 2. In addition, the regulations identify which placard to use when two or more hazardous wastes are transported in the same vehicle. Nonspecific placarding requirements as well as prohibited and permissive placarding may be found in 49 CFR Part 172, Subpart F.

D. Reporting and Recordkeeping Requirements

Generators have several recordkeeping and reporting responsibilities. Large quantity generators, who ship hazardous waste off site or treat, store, or dispose of hazardous waste on site, must submit a Biennial Report to the EPA. Generators must keep signed copies of manifests for at least three years from the date the waste was accepted for transport. Biennial and exception reports also have a three year retention requirement. In addition, generators must keep records of any test results, waste analyses, or other determinations for at least three years. These time periods are automatically extended during the course of any enforcement action.

IV. State Programs

Generators of hazardous waste are not only subject to the federal HMR and RCRA, but are also required to follow individual state regulations. In some cases, state hazardous waste regulations can be more stringent than the federal counterparts. For example, the State of Florida requires conditionally exempt small quantity generators to document by written receipt, delivery of hazardous waste to an off-site facility. In addition, Florida requires all generators to notify the state of any change in generator status and requires generators maintain adequate aisle space between containers for purposes of inspection.

Other states, like Arizona include special requirements for all categories of generators, including conditionally exempt, small, and large quantity generators. California has special rules for waste generation quantity limits, including generators whose waste is hazardous solely because of the presence of silver. California also requires generators to report hazardous wastes of concern that are discovered missing. States can also exempt generators from state specific reporting requirements. For example, small quantity generators in Texas are exempt from certain recordkeeping and reporting requirements.

V. Conclusion

It is increasingly important for retailers to pay close attention to the types of product it handles. If a retailer creates or disposes of product that is classified as or exhibits characteristics of a hazardous waste, it must be stored, treated, and disposed of according to RCRA and the HMR. In addition, retailers should have knowledge of applicable state law and regulations, as states are free to regulate hazardous waste in a manner more stringent than the federal regulations. In general, retailers should know how to identify hazardous waste and their status as a generator, understand regulations pertaining to on-site accumulation, and be familiar with pre-transport requirements and how to comply with the HMR, and follow all recordkeeping and reporting provisions. If you have any questions regarding RCRA or HMR requirements, please do not hesitate to contact our office.

For more information, please contact:

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GENERATOR SUMMARY

	CESQG	SQG	LQG
Quantity Limits	# ≤100 kg/month #≤ 1 kg/month of acute hazardous waste #≤ 100 kg/month of acute spill residue or soil §§261.5(a) and (e)	between 100-1,000 kg/month §262.34(d)	≥1000 kg/month > 1 kg/month of acute hazardous waste > 100 kg/month of acute spill residue or soil Part 262 and §261.5(e)
EPA ID Number	Not required §261.5	Required §262.12	Required §262.12
On-Site Accumulation Quantity	#≤ 1,000 kg # ≤1 kg acute # ≤100 kg acute spill residue §§261.5(f)(2) and (g)(2)	≤6000 kg §262.34(d)(1)	No Limit
Accumulation Time Limits	None §261.5	≤180 days or ≤270 days (if > 200 miles) §§262.34(d) and (e)	≤90 days §262.34(a)
Storage Requirements	None §261.5	Basic requirements with technical standards for tanks or containers §§262.34(d)(2) and (3)	Full compliance for management of tanks, containers, drip pads, or containment buildings §262.34(a)
Off-site Management of Waste	State approved or RCRA permitted/interim status facility §§261.5(f)(3) and (g)(3)	RCRA permitted/interim status facility §262.20(b)	RCRA permitted/interim status facility §262.20(b)
Manifest	Not required §261.5	Required §262.20	Required §262.20
Biennial Report	Not required §261.5	Not required §262.44	Required §262.41
Personnel Training	Not required §261.5	Basic training required §262.34(d)(5)(iii)	Required §262.34(a)(4)
Contingency Plan	Not required 261.5	Basic plan §262.34(d)(5)(i)	Full plan required §262.34(a)(4)
Emergency Procedures	Not required §261.5	Required §262.34(d)(5)(iv)	Required §262.34(a)(4)
DOT Transport Requirements	Yes (if required by DOT)	Yes §§262.30-262.33	Yes §§262.30-262.33