

How to Manage Hazardous Waste

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This article is designed to provide key information on how to manage and dispose of hazardous waste generated at your facility. It does not address how to identify and classify hazardous waste. Regulations addressing proper management of hazardous waste were developed as a result of the passage of the Resource Conservation and Recovery Act signed into law in 1976. The US EPA has responsibility for developing the regulations and recently revised some of them. Each state is required to adopt the changes and while New York has not, Pennsylvania and New Jersey have adopted them. Several of the key differences are highlighted.

As a result of conducting business, a printing operation may generate wastes that are classified as hazardous. Improperly managed wastes expose printers to liability, ranging from enforcement actions such as fines, cleanup costs associated with Superfund liability, and in extreme cases, criminal enforcement.

Generator Status Determination

Once the hazardous wastes have been properly identified, the next step is to determine a company's generator status. This step is critically important because management requirements depend on the facility's generator status. There are three generator categories and each one is based on the amount of hazardous waste generated each calendar month.

The categories are as follows:



Key: 55 Gallon drum = 440 lbs. or 200 Kg.

While not a requirement, it is a good practice to keep a log of how much hazardous waste is generated per month. In many instances, inspectors use the amounts identified on the manifest as a means to determine generator status and this may not be accurate as you can have a single shipment of waste that appears to exceed the monthly threshold, but it may have taken more than a month to generate it.

In addition, if the amount of hazardous waste generated changes from one month to the next or there is an abnormal amount generated, such as the removal of unused obsolete chemicals or a spill cleanup, a facility's generator status will change. While a facility generator status

automatically changes to a higher category, getting it reclassified to a lower status can take some time due to the process of demonstrating that a lesser amount of hazardous waste is being generated.

Note for PA and NJ Generators – EPA’s new regulations allow a generator to maintain their classification for planned or unplanned episodic generation events that result in an increase in the generation of hazardous wastes that exceeds the calendar month quantity limits for the generator’s usual category. In order to take advantage of this provision, the following is required:

- Notify the EPA at least 30 days before a planned event, or within 72 hours after an unplanned event.
- Obtain an EPA ID number (if the generator doesn’t already have one).
- Finish the event AND ship the episodic waste off site within 60 days of starting the event, whether planned or unplanned.

A generator is only allowed to have one planned or unplanned episodic event per year. However, it is possible to have the other type of event but the generator must seek permission first from the state before it occurs. For example, if an unplanned event occurred during the year, no other unplanned event is allowed during that year. A planned event could occur during the same year, once it was approved.

Accumulation Requirements for all Generators

There are two types of accumulation areas when it comes to hazardous waste: central and satellite. Think of central accumulation areas (CAA) as more of a long-term storage location and satellite accumulation areas (SAA) as a short-term collection area.

SAAs are designated collection areas located at or near the point of generation that are under the control of the operator. There is no limit to how many satellite areas a generator’s facility may have, nor is there a limit to the number of containers that can be placed at a satellite accumulation area, but there can be only one container per designated waste stream, such as waste cleaning solvents. There is a 55-gallon limit on the volume of each type of waste that can be accumulated in a SAA.

CAAs are permanent locations where hazardous waste is stored and prepped to be shipped offsite. This is where you would stage the containers for pick up. There are more requirements for this area because of the time the waste can remain in the area. See below for a side by side comparison of the two areas.

Satellite Accumulation Area (SAA)	Central Accumulation Area (CAA)
May accumulate up to 55 gallons of hazardous waste at a single SAA	SQG may keep waste for 180 days and LQG may keep waste for 90 days
Containers should be placed on an impervious surface	Containers should be placed on an impervious surface
Must label containers with words “Hazardous Waste”, Identity of contents (e.g., blanket wash) and Type of hazard (e.g., ignitable or corrosive)	Must label containers with words “Hazardous Waste”, Identity of contents (e.g., blanket wash) and Type of hazard (e.g., ignitable or corrosive) and the date when filling began

Containers must be kept closed, except when adding or removing waste	Containers must be kept closed and be in clean and good condition
Containers must be clean and in good condition	CAA must be: <ul style="list-style-type: none"> • Delineated with line, tape, fence, or in a room, etc. with a sign posted HAZARDOUS WASTE (Area) – 1” high • No floor drains • Post warning sign and emergency phone numbers • Have phone nearby • Have fire extinguisher nearby
When the waste drum is filled, the generator must mark the container with the date	
Must move the container to the central accumulation area within three consecutive days of the drum being filled	
It is prohibited to move hazardous wastes between SAAs	SQGs and LQGs need to conduct weekly inspections and document them

CAA Storage Limit

The storage time for waste in the central accumulation area is tied to the generator status. The storage limit is 90 days for LQGs or 180 days for SQGs. For both SQGs and LQGs, the maximum amount of waste that can be stored is 13,200 pounds. If you are an LQG, it is a good practice to ship your wastes out every two months, every four months for SQGs. For VSQGs there is no time limit, but a weight limit of 2,200 pounds or about four to five drums. Keep in mind that the less waste you have on-site, the less chance you will have a spill or accident. If you are an SQG and you decide to ship your wastes to a licensed facility located more than 200 miles away, the federal regulations allow you to extend your SQG storage time limit for those wastes to 270 days.

Inspections

The purpose of a weekly inspection is so that generators can monitor their facilities for malfunctions or deterioration which may lead to a release of hazardous waste. By inspecting CAAs weekly, generators can identify problems early enough to correct them before they pose a threat to human health or the environment.

Contingency Plan and Emergency Procedures

A contingency plan is required of every LQG to minimize damage to human health and the environment in the event of a hazardous waste accident or any other emergency situation. Plans must include a quick reference guide providing an emergency coordinator, along with 24/7 emergency contacts to allow for a more immediate response in case of an emergency. If they are not in the facility during an emergency, a designated employee must initiate emergency procedures and contact the on-call emergency coordinator. The plan must describe arrangements agreed to with local emergency responders. Maps identifying locations of hazardous waste, emergency exit routes, and all emergency equipment within the facility must be listed.

SQGs and VSQGs are not required to develop contingency plans and formal emergency procedures. However, SQGs are required to identify an emergency coordinator and post emergency contact info in their CAA. SQGs are also required to provide employee training in the event of an emergency and document that they have contacted their local emergency

response organizations (e.g., fire department, police, or local emergency planning commission) to coordinate with them in the event of an emergency situation.

Note for PA and NJ Generators – EPA’s new regulations now require LQGs to prepare and submit to local responders a quick reference guide with the key information when they either develop or update their contingency plans. The key information includes the following:

- The identity of hazardous wastes at the facility, their location, the maximum amount onsite at any time and a description of each waste’s hazards
- Any unique threats or special circumstances involving the wastes and any special medical treatment that might be necessary after exposure
- A site map showing the locations of hazardous wastes as well as routes to access them
- A street map of the facility, including public roads and nearby businesses, schools and residential areas
- Locations of fire hydrants and other water supplies
- Onsite notification system capabilities (alarms, speakers, etc.)
- Names and phone numbers of emergency coordinators

EPA ID Number

Small and large quantity generators must obtain an EPA Identification (EPA ID) number by submitting a completed EPA form 8700-12 with information such as the facility’s name and address, contact information, and a description of the hazardous waste activities conducted at the site. An updated 8700-12 form must be submitted every four years, or whenever the facility changes the type or amount of waste, whichever comes first. The EPA ID number is a combination of letters and numbers that is unique to the site but not to the company. If the company moves location, the company assumes the EPA ID of the new site or, if the new site does not have an EPA ID number, then one must be obtained. If the site changes ownership the facility’s EPA ID does not change.

Note for PA and NJ Generators – EPA’s new regulations now require periodic re-notification for SQGs every four years. Beginning in 2021, an SQG with an EPA identification number must re-notify the state. Re-notification must then be made every four years thereafter (i.e. 2025, 2029, 2033, 2037...) and must be done using EPA Form 8700-12. Re-notification must be submitted by September 1st of each year in which a re-notification is required.

Waste Shipment

For every shipment of hazardous wastes, a manifest or its equivalent is required to accompany the waste. All hazardous waste shipments need to have two copies of the manifest—the generator copy, and facility return to generator copy. In addition, each waste type (e.g., waste solvent, waste inkjet inks, etc.) needs to have a Land Disposal Restriction form submitted with the initial shipment and the first shipment of waste following a change in the waste. This form is mandatory for SQGs and LQGs and optional for VSQGs. To avoid lost forms, a copy of the Land Disposal Restriction form should also be stapled to the corresponding manifests that are kept in the on-site filing system.

Even if your waste hauler prepares your manifest for you, keep in mind that you are still legally responsible for the accuracy and truthfulness of your manifests. If the manifests have contained or contain errors or handwritten corrections made by the driver, it may be time for you to find a different company to handle your waste shipment as you can be fined for any of their errors on the manifest.

Also, keep in mind that EPA has instituted the e-manifest system. Currently paper manifests are still accepted; however, by 2023 use of the e-manifest system will be required. Companies must register with RCRAID and apply for an EPA ID number, if one does not already exist.

Facilities that are classified as VSQGs are not required to use a manifest to ship their hazardous wastes off-site. In addition, VSQGs can also self-transport their waste to a local collection center that is designed to accept hazardous materials from the local community. Usually, these programs limit the amount they will accept to small quantities and it is best to contact the local program prior to taking the waste. Even though a manifest is not required, the shipment of the waste should be otherwise documented with a shipping paper demonstrating that the material was properly handled and disposed.

Container Management for All Generators

Selecting the proper container for your waste is extremely important. First, make sure that your container is compatible with the waste that will be stored in it. Do not store wastes that are not compatible with each other in the same vicinity, it could cause a reaction. Second, make sure that containers are not damaged or leaking, and store them in locations that would prevent these kinds of conditions. Lastly, make sure that wastes with a flashpoint below 100°F can be properly grounded and bonded.

There is a definition of an “empty container” that allows some residual material to remain in it. After all non-acute hazardous waste or liquid industrial waste has been removed using common practices:

- No more than 1 inch (in.), equivalent to 2.5 centimeters, of residue remains on the bottom of the container or inner liner (commonly referred to as the “one-inch rule”); *or*
- No more than 3 percent by weight of total capacity of the container remains in the container or inner liner if the container is less than or equal to 119 gallons (gal) in size; *or*
- No more than 0.3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is greater than 119 gal in size.

Keep in mind that the Department of Transportation (DOT) has a different definition of an “empty” container and depending upon the contents of the container and the presence of any residual product, shipping an “EPA empty” container, one with some residual chemical will require compliance with DOT’s regulations. There are several exceptions with the primary one being the container has a residue of specifically allowable hazardous materials listed in 49 CFR 173.29(b)(iv). This includes certain flammable and combustible materials along with Class 9 substances.

An empty package must have all markings, labels, and placards removed, obliterated, or securely covered in transportation. However, this does not apply to containers in a transport vehicle or freight container if the packaging is not visible in transportation and the packaging is loaded by the shipper and unloaded by the shipper or consignee.

Generators Responsibilities under DOT

Shipping containers have dual regulations under EPA and DOT. EPA regulations must be followed while the waste is onsite. It then transfers to DOT authority once it ships offsite. In order to properly prepare waste shipments, the following steps must be completed: packaging

prevents leakage during transport, and properly label waste to identify the waste and its dangerous characteristics.

Summary and Conclusion

Improper management of hazardous waste are common violations. In order to avoid fines and penalties, it is imperative that printing operations have a clear understanding of the hazardous wastes that are generated and how they are to be managed on-site prior to disposal. Failure to implement programs designed to meet the regulatory requirements creates a situation where the ramifications are greater than the time commitments and costs required to meet the rules.

Need More Help? Contact Tim Freeman at Printing Industries Alliance for assistance. Reach Tim at (716) 691-3211 or tfreeman@PIAlliance.org or Gary Jones at (703) 359-1363 or gjones@sgia.org.