Basic Business Guide for Hazardous Waste Management

Division of Waste and Hazardous Substances, Compliance and Permitting Section

Environmental Concerns

Businesses generate waste every day. Once generated, a business must determine if the waste is a hazardous waste. A business must handle and dispose of its hazardous waste in a manner that ensures the protection of human health and the environment. Achieving compliance with 7 DE Admin. Code §1302 Delaware's *Regulations Governing Hazardous Waste* (DRGHW) will minimize human health and environmental hazards associated with improper hazardous waste management. DRGHW may be found at de.gov/dwhs

Who is a hazardous waste generator?

A generator is defined in DRGHW as "any person [company], by site, whose act or process produces hazardous waste identified or listed in Part 261 of these regulations, or whose act first causes a hazardous waste to become subject to regulation." Household generated hazardous wastes are exempt from regulation (§261.4(b)). However, once combined with business-generated hazardous waste, all the waste becomes subject to regulation.

Identifying Hazardous Waste

A business must first identify all waste streams generated by the site. This includes waste sent to a wastewater treatment plant, recycled materials, off-specification products/raw materials, unusable and/or expired products/raw materials, and all byproducts. The next step is to gather information about the waste to determine all possible hazards associated with that particular waste stream. Information can be found using Safety Data Sheets (SDS), process and/or employee knowledge, and analytical laboratory data.

It is a generator's responsibility to make **accurate** hazardous waste determinations at the point of generation, before any mixing, diluting, or alteration occur (§262.11(a)). The following questions can assist you in making a hazardous waste determination.

1. Is it a solid waste?

Solid Waste is defined in full in §261.2, but in general consists of four types of discarded materials: abandoned materials, certain materials that are recycled in certain ways, materials that are inherently waste-like and military munitions.
Discarded materials are not limited to wastes that are physically in a solid state, as it includes liquid waste, semi-solid waste, and containerized gas.

2. Is the waste excluded or exempt from being a hazardous waste? *

Commonly excluded and/or exempted wastes include normal household refuse, samples sent to a testing laboratory, recycled scrap metal, demolition debris, wastewater discharged under a National Pollution Discharge Elimination System (NPDES) permit, and secondary materials that are returned to the original process(es) in which they were generated without first being recycled/reclaimed outside of the production process system.

3. Is the waste a listed hazardous waste? *

Commonly listed hazardous wastes include spent solvents, distillation bottoms from spent hazardous chemical reclamation, acute hazardous wastes, discarded commercial chemical products, and off-specification batches of chemical products.

4. Does the waste exhibit a hazardous characteristic? *

- ***Ignitable*** wastes have a flash point below 140°F (60° C) or is an ignitable compressed gas.
- ***Corrosive*** wastes are liquids with a pH ≤2 or ≥12.5.
- ***Reactive*** wastes chemically react with substances, such as water, producing toxic fumes and/or are capable of detonation.
- ***Toxic*** wastes will release toxic heavy metals (e.g., arsenic, cadmium, lead, mercury), pesticides, or volatile organic compounds (e.g., trichloroethylene {TCE}) under acidic conditions.

***NOTE:** Full details for exclusions, exemptions, characteristic hazardous wastes, and listed hazardous wastes can be found in the following sections of DRGHW, Part 261.

If your waste is **not** excluded or exempt, and you answered yes to question 2 and/or 3 for any waste produced by your business, your company is a ***hazardous waste generator****. This fact sheet will address the basic requirements for each generator category with regard to the management of hazardous waste.

Exclusions/Exemptions	**§261.4**
Characteristic Waste (D-listed)	**§261.24**
Non-specific Source Wastes (F-listed)	**§261.31**
Specific Source Wastes (K-listed)	**§261.32**
Acutely Toxic Wastes (P-listed)	**§261.33(e)**
Toxic Wastes (U-listed)	**§261.33(f)**

Determining Generator Category (§262.13)

Generator category is based on the amount of hazardous waste generated per calendar month. Your site will be either a very small quantity generator (VSQG), a small quantity generator (SQG), or a large quantity generator (LQG) of hazardous waste. When counting waste, do not include the amount of excluded and/or exempt waste, non-hazardous waste, used oil, or universal waste when determining your generator category.

See **Table 1** to help you determine your generator category based on the Monthly Generation Rate column.

Table 1: Generator Category and Accumulation Limits

Size:	Monthly Generation Rate:	Maximum Accumulation:	Accumulation Time Limits:
VSQG	≤ 100 kg (~220 lbs) ≤ 1 kg (~2.2 lbs) acute hazardous waste ≤ 100 kg (~220 lbs) acute hazardous waste clean-up residue	1,000 kg (~2,200 lbs) or 1 kg (~2.2 lbs) acute hazardous waste	No limit
SQG	> 100 – < 1,000 kg (~220 – 2,200 lbs) ≤ 1 kg (~2.2 lbs) acute hazardous waste	6,000 kg (~13.200 lbs)	Ship waste off-site within 180 days of the date waste was first put into the container
LQG	≥ 1,000 kg (~2,200 lbs) > 1 kg (~2.2 lbs) acute hazardous waste > 100 kg (~220 lbs) acute hazardous waste clean-up residue	No limit	Ship waste off-site within 90† days of the date waste was first put into the container

† A LQG may exceed the 90-day accumulation time limit ONLY with prior approval from the CAPS.

Hazardous Waste Accumulation Limits

See **Table 1** for the maximum accumulation quantities and accumulation time limits. Please note that, VSQGs do not have accumulation time limits requiring hazardous waste be shipped within a specified number of days, but rather, VSQGs cannot exceed hazardous waste accumulation quantity limits and maintain VSQG status. Should a VSQG exceed the accumulation quantity limits, they must immediately comply with the regulatory requirements for the new larger generator category in which they fall.

Obtaining an EPA Identification (EPA ID) Number (§262.18)

SQGs and LQGs must complete a RCRA Subtitle C Site Identification (Notification) Form (EPA Form 8700-12) to obtain an EPA ID number free of charge. VSQGs are encouraged to obtain an EPA ID number, although it is not required. EPA ID numbers are specific to a location and you need only obtain an EPA ID once for each location. Once you obtain an EPA ID number for a location, it is to be used for all hazardous waste shipments. Forms and notification instructions are available on DNREC's website at: dnrec.alpha.delaware.gov/waste-hazardous/management/hazardous/reporting

Renotification (§262.18)

If a generator's information changes due to a change in generator category, business name, ownership, contacts, etc., an update to site information should be made by submitting a revised notification form with the "subsequent notification" box checked. Remember, EPA ID numbers are specific to a location. If your business relocates, you must submit a subsequent notification indicating you are no longer generating hazardous waste at the previous location AND submit a notification form to obtain an EPA ID number for the new location.

SQGs are required to re-notify DNREC of their generator status every four (4) years by completing and submitting the Site ID form (EPA Form 8700-12). Submittal of the Site ID form (in full) anytime within the four years before the September 1st deadline fulfills this requirement.

LQGs are required to re-notify DNREC each year by March 1st by completing the Site ID Form (EPA Form 8700-12), which can be submitted as part of the required Annual Report.

Hazardous Waste Accumulation Container Requirements

All containers of hazardous waste must remain closed unless adding or removing waste from the container. All containers of hazardous waste must be in good condition (e.g., not cracked or leaking) and compatible with the waste contained within. Incompatible wastes must not be mixed together within the same container unless complying with §265.17(b) which requires that mixing wastes does not results in fires, violent reactions, explosions, gaseous releases, or other dangers to human health and the environment. Containers of incompatible wastes are not be accumulated together in close proximity without physical separation.

VSQGs must mark containers of hazardous waste with the words "Hazardous Waste" or with the word "Waste" followed by a description to identify the contents of the container (e.g., Waste Acetone, Waste Solvent).

SQGs and LQGs must mark both Satellite Accumulation Area (SAA) and Central Accumulation Area (CAA) containers of hazardous waste with the words "Hazardous Waste" and an indication of the hazard of the contents. Hazard indicator examples include, but are not limited to (see **Figure 1**):

- The applicable RCRA hazardous waste characteristic (i.e. ignitable, corrosive, reactive, toxic), or
- DOT hazard communication, or
- OSHA hazard statement or pictogram, or
- NFPA chemical hazard label

Additionally, SQGs and LQGs must mark 180/90-day CAA containers of hazardous waste with the accumulation start date; this date is determined by the date waste is first placed into the CAA container or the date the container is moved from a SAA to the CAA to await off-site shipment. Prior to shipping wastes off-site, SQGs and LQGs are required to identify all applicable RCRA waste codes identified in Subparts C and D of Part 261, and mark containers with all applicable waste codes.

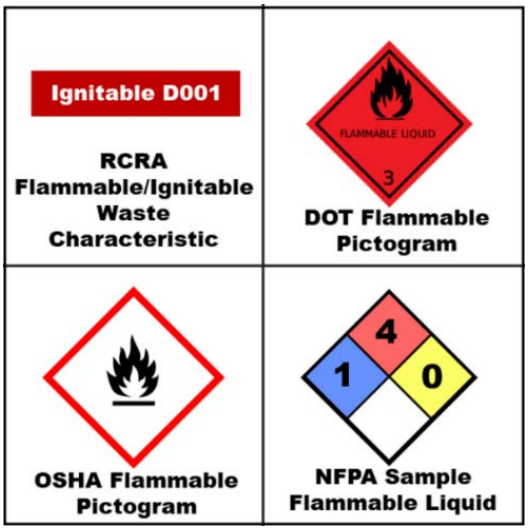

Figure 1: Hazard Indication Examples

Satellite Accumulation Areas (§262.15)

Sites operating as SQGs or LQGs are afforded the ability to accumulated hazardous waste SAAs. VSQGs do not have SAAs standards because hazardous waste is managed the same throughout the site regardless of where the waste is accumulated. A SAA is a hazardous waste accumulation area that is located at or near the point of generation, under the control of the operator and contains no more than 55 gallons of hazardous waste or no more than 1 quart of acute hazardous waste. The point of generation is the place in the process where hazardous waste is first generated. Examples of SAAs being at or near the point of generation would be an process line that drains spent material directly into a 55-gallon drum, or waste generated on a lab work bench where HPLC spent solvent accumulates in a 1-gallon jug prior to being emptied into a 55-gallon drum within the same lab. Alternatively, taking the hazardous waste generated from the lab into a shed that is located outside the building would not be considered "at or near the point of generation." In this scenario, both the shed and waste are required to be managed under CAA requirements.

When more than 55 gallons of hazardous waste (or 1 quart of acute hazardous waste) are accumulated in a SAA, the excess must immediately be dated and moved to a CAA, on-site treatment facility, or shipped off-site for management. For the purposes of this paragraph, "immediately" means within the same shift in which the accumulation amount limit was exceeded. Please refer to the Satellite Accumulation Waste Management fact sheet for more information regarding SAA requirements.

180/90-Day Central Accumulation Areas

(§262.16 and §262.17)

A CAA is an area, or areas, established by a SQG or LQG for the purpose of accumulating hazardous waste. A CAA does not require a storage permit, provided all applicable regulatory requirements in §262.16 or §262.17, as applicable for the generator category, are met. CAAs can be any of the following: an area where hazardous waste containers are stored, a hazardous waste tank, a containment building, or a drip pad. The most common waste accumulation method used in CAAs is container storage, e.g., filled containers removed from SAAs, 55-gallon drums, totes, etc. Should your site accumulate hazardous waste in a tank, on a drip pad or in a containment building, please review the regulations pertinent to your generator category. The remainder of this section will address the requirements for a container-based CAA.

CAAs are required to have a secondary containment system in order to prevent releases of hazardous constituents into the environment. Secondary containment systems can be an enclosed building OR an area with an impervious floor surrounded by adequate curbing to collect spills. Secondary containment systems must be able to hold 10% of the total volume of all containers or the volume of the largest container, whichever is greater. The system must be free of cracks or gaps and sufficiently impervious so as to contain leaks and spills until the collected hazardous waste is detected and immediately removed.

SQGs and LQGs must conspicuously place "No Smoking" signage wherever there is any ignitable or reactive waste present. Remember that ignitable waste must not be accumulated near sources of ignition. LQGs cannot accumulate ignitable or reactive wastes within 50 feet (15 meters) of the site's property line without written approval from the authority having jurisdiction over the local fire code.

SQGs and LQGs must conduct and document weekly inspections for all CAAs. Weekly inspections must include looking for leaking containers, signs of deteriorated

containers, and signs of deterioration in the secondary containment system. The inspector should confirm there is enough aisle space to allow easy access and visibility to all containers of hazardous waste accumulated in these areas.

When a LQG decides to no longer utilize for the waste accumulation area/unit once all hazardous waste has been removed. LQGs accumulating waste in a CAA must meet certain conditions prior to closure of a waste accumulation area/unit. The LQG must either place a notice in the operating record within 30 days after closure identifying the location of the unit within the facility; or meet the closure performance standards (§262.17(a)(8)(iii) and (iv)) and notify DNREC using EPA Form 8700-12 within 90 days of closure. When closing an entire facility, the LQG must notify DNREC using EPA Form 8700-12 no later than 30 days prior to closing the facility and within 90 days after closing the facility that it has complied with the closure performance standards.

Waste Mixing (§262.13(f))

A VSQG mixing hazardous waste with non-hazardous solid waste will remain subject to VSQG requirements (§262.14) even though the mixture may exceed the permissible VSQG quantity limits **as long as the mixture does not exhibit one or more of the characteristics of a hazardous waste**. If the mixture exhibits a hazardous waste characteristic, the mixture is a newly generated hazardous waste and **must be counted and managed as hazardous waste along with any other hazardous waste generated in the calendar month.** VSQGs should not mix hazardous waste with used oil as a used oil/hazardous waste mixture to full hazardous waste regulations.

Mixtures of hazardous waste and solid waste by SQGs and LQGs are subject to:

- The mixture rule in §§261.3(a)(2)(iv), (b)(2) and (3), and (g)(2)(i);
- The dilution rule in §268.3(a);
- The LDR requirements of § 268.40 if a characteristic hazardous waste is mixed with a solid waste so that it no longer exhibits the hazardous characteristic; and
- The hazardous waste determination requirement in § 262.11.

VQG to LQG Waste Consolidation

(§262.14(a)(6)(viii) and §262.17(f))

A VSGQ may send their waste to a LQG operating under control of the same person without using a permitted hazardous waste transporter.

The VSQG must mark and label waste containers with the words "Hazardous Waste" and an indication of the hazards of the contents. The LQG must:

- Notify DNREC on Site ID Form (8700-12) of the activity and identify participating VSQGs (must be done 30 days in advance of first shipment)
- Maintain records of each shipment
- Add an accumulation start date to each VSQG container upon arrival at the LQG. If consolidating received waste into a new container, mark the earliest accumulation start date on the new CAA container.
- Do not accumulate the VSQG waste on site for longer than 90 days from day of receipt
- Manage waste as LQG hazardous waste ensuring TSDF disposal/treatment
- Report waste received in Annual Hazardous Waste Report

Hazardous Waste Shipments

A generator is responsible for its hazardous waste from the point of generation through its ultimate disposal, also known as "cradle to grave" management. Hazardous waste must be transported and disposed of properly to minimize human health and environmental hazards. It is the responsibility of the generator to choose a vendor who fulfills the following requirements:

- Transporters that have a current Delaware Hazardous Waste Transporter Permit
- Treatment, Storage, and Disposal Facilities (TSDF) that are permitted in the state in which the TSDF is located

You may contact the Compliance and Permitting Section (CAPS) at 302-739-9403 to request a current list of permitted Delaware Hazardous Waste Transporters.

VSQGs are not subject to a time limit requiring they ship hazardous waste off-site. However, VSQGs should be aware of the amount of hazardous waste accumulated throughout the site and ship waste off-site prior to exceeding maximum accumulation quantity limits.

VSQGs must maintain, for a period of three (3) years, all tolling agreements, letters of acceptance, or manifests demonstrating delivery of their hazardous waste to an off-site destination facility. A VSQG may **NOT** take its waste to a Delaware Solid Waste Authority (DSWA) Household Hazardous Waste Collection Event for disposal.

SQGs must ship hazardous waste off-site within 180 days of the accumulation start date. LQGs must ship hazardous waste off-site within 90 days of the accumulation start date. SQGs and LQGs must maintain, for a period of three (3) years, all manifests demonstrating delivery of its hazardous waste to a permitted off-site destination facility (TSDF). Land Disposal Restriction (LDR) forms should accompany each manifest or be kept easily accessible for each hazardous waste stream generated at your location.

As a reminder, prior to shipping waste off-site, SQGs and LQGs are required to identify all applicable RCRA waste codes identified in Subparts C and D of DRGHW Part 261, and mark each container with all applicable waste codes. A generator must keep track of each hazardous waste shipment and its delivery to the TSDF. If the generator does not receive a copy of the TSDF signed manifest within 35 days of the initial manifest shipment date, the CAPS must be notified. An Exception Report must be submitted within five (5) calendar days if a manifest with the TSDF's signature is not received within 45 days of the initial manifest shipment date.

Planning for Emergencies

Hazardous waste generators can prevent emergencies by having up-to-date work practices, providing adequate training to their employees, and providing a clean and well-maintained working environment. In addition, emergency response procedures to address spills must be developed and implemented. Keep emergency equipment and spill kits in an easily accessible location with clear labels so they are ready for use in the event of an emergency.

SQGs and LQGs must (§§262.16(b) and 262.17(a)(6)):

- Designate an emergency coordinator
- Maintain emergency equipment (fire extinguishers, spill kits, and decontamination equipment)
- Have an internal communication/alarm system and/or telephone easily accessible near each accumulation area
- Provide and document adequate training for personnel handling hazardous waste
- Notify local authorities (e.g., fire department, police department, hospital or LEPC) of the site's hazardous waste activities and the location(s) where hazardous waste is accumulated.

Additionally, SQGs must (§262.16(b)(9)(ii)):

Post contact information for the emergency coordinator, the location(s) of emergency equipment, and the fire department's telephone number by the telephone nearest each accumulation area – this is for BOTH SAAs and CAAs.

Additionally, LQGs must (§262.262):

Develop a complete contingency plan that at a minimum, contain the following:

- Describe actions to be taken in an emergency
- Describe arrangements with local authorities
- List name and emergency phone number for all designated emergency coordinators
- List all emergency equipment on-site and its locations
- Have a site evacuation plan that states the signals which initiate evacuation, routes, and alternative routes.
- A Quick Reference Guide with all the components listed in §262.262(b).

A printed copy of the contingency plan must be maintained on-site. The plan must be periodically reviewed and amended when applicable.

Training Personnel

It is the responsibility of a hazardous waste generator to train employees on proper hazardous waste management. This is not the same as the commonly coined "Right-to-Know" training or "Slip, Trips, and Falls" training that many businesses offer its employees. Hazardous waste training must be specific to the hazards that employees might encounter while managing wastes determined to be hazardous.

SQGs and LQGs are required to train **ALL** employees who handle hazardous waste, this includes, but is not limited to the site's emergency coordinator(s), those who sign manifests, those conducting weekly inspections of SAAs/CAAs, or those who transfer wastes from SAAs/CAAs. Training may be conducted in a "classroom" setting or electronically.

LQGs must train new employees who handle hazardous waste within 6 months of their starting employment or the employee's working in a position where training is required. LQGs must conduct and maintain record of the initial and annual refresher training for all employees handling and managing hazardous waste. Remember that the emergency coordinator(s) must have adequate hazardous waste management training and that this training also needs to be refreshed annually. LQGs must also maintain a list of personnel who handle hazardous waste including their job title, written job description, and amount of training needed for their hazardous waste management duties.

VSQGs have no hazardous waste training record keeping requirements. However, the CAPS strongly recommend VSQGs develop a basic hazardous waste management training program to ensure its employees are familiar with the hazards of the wastes they handle. This training should include what to do during an emergency.

Recordkeeping Requirements

See **Table 2** on the next page for recordkeeping requirements for each generator category.

Table 2: Record Keeping Requirements by Generator Category

Requirement	VSQG	SQG	LQG
Maintain analytical data or other reports for waste stream characterizations	✓	✓	✓
Maintain manifests or other shipment documentation for 3 years	✓	✓	✓
Maintain manifest exception reports for 3 years (if applicable)	✓	✓	✓
Maintain Land Disposal Restriction (LDR) forms		✓	✓
Conduct and maintain records documenting weekly inspections at CAAs for 3 years		✓	✓
Provide one-time hazardous waste specific training to all employees handling hazardous waste		✓	
Provide annual hazardous waste specific training to all employees handling hazardous waste			✓
Make arrangements with local emergency response agencies (fire, police, and hospital) notifying them of the type of waste accumulated on-site and its hazards. Maintain records of notifications for 3 years from last being applicable		✓	✓
Designate emergency coordinator(s)		✓	✓
Post emergency information near Accumulation Area telephone(s)		✓	
Develop and continually update hazardous waste contingency plan and provide a copy to local emergency response agencies			✓
Maintain list of employees, job titles, and job descriptions for each employee handling hazardous waste			✓
File annual report by March 1 each year and maintain each for 3 years			✓

This fact sheet is a summary provided as a courtesy to businesses. It is not intended as a substitute for 7 DE Admin. Code 1302, Delaware's *Regulations Governing Hazardous Waste* (DRGHW), Parts 260-266, 268, 273 and 279. regulations.delaware.gov/AdminCode/title7/1000/1300/1302/

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