

HAZARDOUS MATERIALS PROGRAM ENVIRONMENTAL FACT SHEET

Accumulation and Storage of Hazardous Waste

Virtually all business that generate hazardous waste store their hazardous waste onsite in some way. However, the location, method, and timeline for accumulation and storage depend on various factors. While generators do have some discretion in this area, the Vermont Hazardous Management Regulations (VHWMR), particularly [Subchapter 3](#), establish the requirements that must be followed. As with other areas of the regulations, the requirements are largely based on the amount and type of hazardous waste a business generates. This fact sheet provides a summary of these requirements; please refer to the VHWMR for the comprehensive requirements.

What determines my generator category?

There are three categories for hazardous waste generators, as shown in the table below, each with unique limits for storage and accumulation of hazardous waste: very small quantity generators (VSQGs), small quantity generators (SQGs), and large quantity generators (LQGs). A generator's category is usually based on the type and quantity of hazardous waste generated each calendar month. However, the amount of hazardous waste *stored on-site* also needs to be considered. For example, a facility that generates less than 220 pounds per month but also stores more than 2,200 pounds on-site, is regulated as a SQG and is subject to all regulatory requirements applicable to SQGs. Note that generation or storage of more than 2.2 pounds of acutely hazardous waste always confers LQG status, with the exception of hazardous waste pharmaceuticals regulated according to Subchapter 10.

Generator Category	HW Generated (calendar month)	Acute HW Generated (calendar month)	HW Accumulation (on-site at any time)
VSQG	≤ 220 lbs. (100 kg)	≤ 2.2 lbs. (1 kg)	< 2,200 lbs. (1,000 kg) HW ≤ 2.2 lbs. (1 kg) acute HW
SQG	> 220 lbs. (100 kg), and < 2,200 lbs. (1,000 kg)	≤ 2.2 lbs. (1 kg)	< 13,200 lbs. (6,000 kg) HW
LQG	Any amount	> 2.2 lbs. (1 kg)	> 13,200 lbs. (6,000 kg) HW ≥ 2.2 lbs. (1 kg) acute HW
	≥ 2,200 lbs. (1,000 kg)	Any amount	

Note: HW = hazardous waste. Generators should be aware that used oil, universal waste, exempt waste (conditional, recycling), and waste from an episodic event do not count in calculating generator category. These wastes also have different requirements for accumulation and storage that are not covered in this fact sheet.

How long am I allowed to store my hazardous waste?

As shown in the table below, the amount of time allowed for storage depends on a facility's generator category.

Generator Category	Time Limit for Storing HW
VSQG	No time limit for storing up to 2,200 lbs. (1,000 kg) HW.
SQG	Up to 180 days from when HW goes into storage.
LQG	Up to 90 days from when HW goes into storage.

Note: HW = hazardous waste. Generators should be aware that used oil, universal waste, exempt waste (conditional, recycling), and waste from an episodic event have different requirements for accumulation and storage that are not covered in this fact sheet.

When is a hazardous waste generated, and when does storage begin?

A hazardous waste is generated when a material is deemed no longer useable (i.e., it is waste) and a hazardous waste determination is made. While not always the case, after hazardous waste is generated, it is typically placed in a container (i.e., accumulated onsite), and then it is stored onsite in some form. Because the time at which a hazardous waste goes into storage establishes how soon the waste must be shipped offsite by SQGs and LQGs, it can be helpful to imagine that a clock starts ticking as soon as any of the following occur:

- A container (up to 55 gallons in volume, or one cubic yard for non-liquid waste) that is used for accumulating hazardous waste (known as a satellite accumulation container) becomes full
- A container of hazardous waste is moved into a hazardous waste storage area
- A container of hazardous virgin product is determined to be unusable and moved into a hazardous waste storage area

What is satellite accumulation of hazardous waste, and what requirements must be followed?

Satellite accumulation is the placement of hazardous waste into a container at or near its point of generation, which is under the control of the operator of the process generating the waste (instead of placing it in short-term storage, as described later in this fact sheet). This container is referred to as a satellite accumulation container. Note that only one satellite accumulation container can be used per process line waste stream and that satellite accumulation of hazardous waste is limited to containers that are 55-gallons in volume of liquid and one cubic yard of non-liquid waste.

Requirements for Satellite Accumulation

Although there is no time limit for how long a hazardous waste may be accumulated in a satellite accumulation area, there are limits to the quantity that can be stored and requirements for how the container must be managed. While satellite accumulation requirements do not apply to VSQGs, both SQGs and LQGs may accumulate as much as one cubic yard of non-liquid Vermont-listed hazardous waste, one quart of liquid acute hazardous waste, 2.2 pounds of solid acute hazardous waste, or up to

55 gallons of any other hazardous waste (the last of these is the most common in Vermont) in a satellite accumulation container provided:

- The container:
 - Is made of materials that are compatible with the hazardous waste being accumulated.
 - Is in good condition.
 - Is located upon an impervious surface and within a structure that sheds rain and snow.
 - Remains closed except when adding, removing, or consolidating waste; or when temporary venting is necessary for proper operation or to prevent build-up of pressure.
 - Is marked or labelled with the words “Hazardous Waste” and an indication of the *hazards* of the contents (e.g., the applicable hazardous waste characteristics: ignitable, corrosive, reactive, toxic).
 - Is maintained with aisle space between rows of containers of at least 24 inches wide, sufficient to allow the unobstructed movement of personnel; and sufficient to allow fire protection, spill control, and decontamination equipment to any area of facility operation.
- When a satellite accumulation container becomes full, the generator must:
 - Mark the *date* on the container or container label to indicate when it became full. This date will start the storage time limit (see section below).
 - Move the container to a STSA or an off-site designated facility *within three consecutive calendar days* of the date marked on the container or container label.

Note: Transfer of hazardous waste from one satellite container to another is not allowed. With this in mind, it is not advisable to choose a large container to accumulate a relatively small amount of hazardous waste. For example, if a business generates 10 gallons of hazardous waste per year in one of their waste streams, this hazardous waste should not be accumulated in a 55-gallon drum. Generators should choose an appropriately sized container that best accommodates their waste generation practices.

What is a short-term storage area (STSA), how is it used, and what requirements must be followed?

STSA refers to any on-site hazardous waste storage area with hazardous waste stored for a defined period of time (see table above, “Time Limit for Storing HW”) and without requiring a facility to obtain a waste storage permit. STSAs are primarily used for storing full containers of hazardous waste prior to shipping them offsite. STSAs can also be used for accumulating hazardous waste but note that requirements for accumulating hazardous waste in a STSA differ from the requirements for satellite accumulation mentioned above. The section below summarizes how STSAs can be used for storing and accumulating (prior to storing or shipping offsite) hazardous waste.

Storing Full Containers of Hazardous Waste in a STSA

STSAs are primarily used to store full containers of hazardous waste prior to shipping them offsite. Containers used for the short-term storage of hazardous waste must be marked with the date to indicate when the storage of waste began. This date is the beginning (i.e., Day 1) of the timed storage limit—180 days for SQGs, 90 days for LQGs. Note that full satellite containers should already be marked with a date when the container became full (see section above). In addition to marking the

date for the start of storage on each container placed in the STSA for short-term storage, the following container management standards also apply:

- Containers must be marked or labeled with the following:
 - The words “Hazardous Waste.”
 - An indication of the *hazards* of the contents (e.g., the applicable hazardous waste characteristics: ignitable, corrosive, reactive, toxic).
- Containers must be in good condition (i.e., not damaged, bulging, leaking) and compatible with the wastes they hold.
- Containers must remain closed except when it is necessary to add or remove waste.
- Incompatible wastes must not be placed in the same container.
- Waste must be shipped offsite based on the generator’s storage time limit (180 days for SQGs, 90 days for LQGs)

Accumulating Hazardous Waste in a STSA

SQGs and LQGs may accumulate as much as one cubic yard of non-liquid Vermont-listed hazardous waste, one quart of liquid acute hazardous waste, 2.2 pounds of solid acute hazardous waste, or 55 gallons of any other hazardous waste (the last of these is the most common in Vermont) in a STSA under two different scenarios:

1. Container is Used for Waste from Shift Accumulation

In this scenario, waste is brought directly from the point of generation to the STSA by the end of each work shift (defined as 12 hours or less). This is sometimes referred to as “shift accumulation” and is like having a satellite accumulation container located (or stationed) in the STSA rather than at the point of generation (see section below). However, this form of management comes with additional requirement and is only permissible provided that:

- The waste has been collected in a shift accumulation container (typically a small container near the point of generation) that is:
 - Chemically compatible with any accumulated waste and in good condition.
 - Kept closed except to add or remove waste.
 - Marked or labeled with the words “Hazardous Waste” and other words that identify the *contents* of the container.
- The waste is brought directly to the STSA by a trained employee.
- Only one container per process line waste stream can be in use in the STSA.
- The container maintained in the STSA is:
 - A maximum of 55 gallons in volume.
 - Marked to indicate that it is an *accumulation* container.
 - Marked to describe the *point of waste generation*.
 - Marked to indicate the *date it becomes full*; the container does not need to be marked with the date while it is being filled.
- STSAs with containers used for accumulating waste from shift accumulation must be inspected *daily* (instead of weekly).

2. Accumulation Container is Maintained in STSA

In this scenario, the generator adds waste to a container that is located in the STSA on an infrequent basis, not within 12 hours of generation as described above. Containers used for this type of waste accumulation are regulated just like full containers storing hazardous waste in the STSA (described above):

- Containers must be marked or labeled with the following:
 - The words “Hazardous Waste.”
 - An indication of the *hazards* of the contents (e.g., the applicable hazardous waste characteristics: ignitable, corrosive, reactive, toxic).
 - The *date* upon which the period of short-term storage begins. In this scenario, the date will indicate when the waste was first added to the container, commonly referred to as “dated from the first drop.”
- Containers must be in good condition (i.e., not damaged, bulging, leaking) and compatible with the wastes they hold
- Containers must remain closed except when it is necessary to add or remove waste.
- Incompatible wastes must not be placed in the same container.
- Container must be shipped off-site within 180 days/90 days (depending on generator category) of “first drop” date, even if the container is not full.

What are the management standards for all STSAs, regardless of whether they are used for storing and/or accumulating hazardous waste?

While short-term storage requirements do not apply to VSQGs, there are multiple regulatory standards that SQGs and LQGs must meet for their STSAs. These standards are established in Section 7-311 of the VHWMR. The following is a summary; refer to the regulations for a complete list of requirements:

Design Standards

- Generators must store hazardous waste containers on an impervious surface.
- Hazardous waste containers may be placed out-of-doors only if they are within a structure that sheds rain and snow; hazardous wastes subject to freezing may not be stored outdoors unless mechanical or physical means are employed to prevent freezing.
- Spill and fire control equipment must be available in the immediate vicinity of each STSA.

Operating Standards

- Containers holding hazardous wastes that are incompatible with hazardous wastes held in other containers must not be stored in the same structure or area unless they are segregated in a manner that prevents the wastes from coming into contact with one another.
- Containers of hazardous waste must be stored in a manner to ensure hazardous waste labeling is visible.
- Aisle space between rows of containers must be at least 24 inches wide, sufficient to allow the unobstructed movement of personnel; and sufficient to allow fire protection, spill control, and decontamination equipment to any area of facility operation.

Inventory and Inspection

- Generators must maintain a list of all hazardous waste currently in storage, and this must be maintained at a location that is apart from the STSA and accessible during an emergency;

electronic record keeping is permissible. For generators storing hazardous waste in containers, the list must identify each container being stored and the type of hazardous waste held by each container. Any hazardous waste being accumulated within a STSA must be included on the list of hazardous waste in storage.

-Note: Access the Program website for a [hazardous waste inventory template](#).

- Generators must conduct *weekly* (at least every seven days) inspections of each STSA. Generators who accumulate hazardous waste in STSAs at the end of each shift must conduct *daily* inspections during regular business days for each STSA. Note that regular business days are days when personnel are normally scheduled to be on site.
- Inspections shall be recorded in a log that is kept at the facility for at least three years. There are no retention requirements for inventory records; only the current inventory must be available on site.

Security

- Generators must post a sign at each STSA stating, "Danger-Hazardous Waste Storage Area-Authorized Personnel Only". The sign must be visible from 25 feet. For facilities located in counties bordering Quebec, the sign must be written in both English and French.
- Generators storing ignitable waste (flash point less than 140°F) must also post a sign at each STSA, which must be visible from 25 feet with the legend, "No Smoking". For facilities located in counties bordering Quebec, the sign must be written in both English and French.

Use and Management of Containers

Requirements for container management largely depend on how containers are used and where they are located at a facility. In summary, all containers of hazardous waste in STSAs must be:

- Marked or labelled with the words "Hazardous Waste."
- In good condition.
- Compatible with the wastes they hold
- Closed except when adding or removing waste.

Are there any other considerations related to accumulating and storing hazardous waste?

SQGs and LQGs should note that using STSAs as outlined in the regulations is an option. Generators are not required to set up STSAs or manage waste per STSA standards. A generator may choose to ship satellite accumulation containers directly from the point of generation. In this scenario, satellite containers must be shipped from the facility within three days of becoming full.

While each facility is unique, hazardous waste generators should be aware that some of the most common violations that Program personnel encounter when conducting compliance evaluation inspections (CEIs) include incorrectly or incompletely labeled containers (both satellite and STSA containers), satellite containers that are observed open, STSA containers that are missing dates that indicate when storage began, and containers being stored longer than permissible by regulation (180 days for SQGs, 90 days for LQGs).

For more information regarding accumulation and storage of hazardous waste, or if you have other hazardous waste management questions, please contact:

Hazardous Materials Program – Hazardous Waste Section
Waste Management and Prevention Division
Vermont Department of Environmental Conservation
1 National Life Drive – Davis 1
Montpelier, VT 05620-3704
802-828-1138
<https://dec.vermont.gov/waste-management/hazardous>