

Satellite Accumulation Requirements for Hazardous Waste Management

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Introduction

Wisconsin businesses and institutions are required by federal and state laws to manage hazardous waste in accordance with the requirements of the federal Resource Conservation and Recovery Act (RCRA) and analogous state regulations found in [chs. NR 600-679](#), Wisconsin Administrative Code.

Hazardous wastes that are routinely accumulated in containers from activities such as process lines or laboratories may be subject to reduced requirements when these containers are maintained in accordance with the applicable regulatory provisions. The containers must be kept in satellite accumulation areas (SAA) that are at or near the Point of Generation (POG) of the waste and kept under the control of the operator of the process that is generating the waste. In addition, while the specified accumulation area may have more than one container or waste stream, the area is restricted to accumulating no more than 55 gallons of non-acute hazardous waste or 1 quart of acute hazardous waste. [s. NR 662.034 (3), Wis. Adm. Code]

Generators must count hazardous waste accumulated at their SAAs when evaluating their generation totals each calendar month. Correct generation totals are required to accurately establish the generator status of the facility.

This document provides definitions, general requirements, and common scenarios pertaining to hazardous waste SAAs regulated by the Wisconsin Department of Natural Resources (DNR) hazardous waste program. It is applicable to large and small quantity hazardous waste generators (LQG and SQG), along with treatment, storage and disposal facilities (TSD) that are also hazardous waste generators.

For further guidance on waste generation, counting monthly totals, and other applicable regulatory requirements, see the [Quick Reference Guide \(WA-1821\)](#). Hazardous wastes that are excluded from counting toward monthly generation totals are outlined in [s. NR 662.220\(2\), Wis. Adm. Code](#).

Definitions and Clarifications

Satellite accumulation areas (SAA): While not specifically defined in Wisconsin's hazardous waste code, federal guidance states that a SAA is a designated area at or near a POG where hazardous waste is initially accumulated in containers, prior to consolidating the hazardous waste at a designated Central Accumulation Area. Satellite accumulation is limited only to containers, and is prohibited from occurring in tanks, waste piles, or other hazardous waste management units. More than one waste stream may be collected at a satellite accumulation area. Regardless of how many containers are in the area, the total amount of waste at each SAA cannot exceed 55 gallons.

There is no limit to the number of SAAs located throughout a facility, and the locations are typically dictated by the operations and layout of the facility.

Central accumulation area (CAA): CAA refers to the area or areas in the facility where hazardous waste accumulation occurs in containers and tanks. These areas do not require operating licenses, so long as the requirements for SQGs and LQGs in ss. NR 662.192 or NR 662.034, respectively, are met. This includes CAAs with 90-day, 180-day or 270-day accumulation time limits. Generators may have more than one CAA on site. The word “central” is used because many generators use a CAA to consolidate or centralize their hazardous waste from multiple SAAs prior to shipment off-site.

Container: A container is defined as any **portable device** in which a material is stored, transported, treated, disposed of, or otherwise handled. For details on treatment in containers, refer to Table 1, *Summary of SAA Container Requirements*, on page 3. [s. NR 660.10 (14), Wis. Adm. Code]

Closed (containers): A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste, or consolidate waste, or when temporary venting of a container is necessary for the proper operation of equipment or to prevent dangerous situations, such as build-up of extreme pressure. When the U.S. Environmental Protection Agency (EPA) developed the rule, EPA interpreted the word “closed” to mean “vapor tight and spill proof.” For details on closed container standards, see [Closed Container Guidance for Hazardous Waste Generators \(WA-1342\)](#). [s. NR 665.0173 (1), Wis. Adm. Code]

Good condition (containers): Hazardous waste must be stored in containers that are in good condition. Hazardous waste in defective containers must be transferred to containers in good condition or handled in a way that satisfies the requirements of [subch. I of NR 665, Wis. Adm. Code](#). Containers are in good condition when they are free of dents, creases, bulging, corrosion and leaks.

When shipped off-site, containers must also meet U.S. Department of Transportation (DOT) requirements and packaging standards.

Compatible (containers) / Incompatible waste: When a hazardous waste causes corrosion or decay of a container or inner liner, it is considered “incompatible” with the container. When a hazardous waste is commingled with another waste or material and produces heat or pressure, fire or explosion, violent reaction, toxic dusts, mists, fumes or gases, or flammable fumes or gases, it is considered “incompatible” with that waste or material. An example would be acid waste stored in a metal container without an appropriate liner, as the acid may corrode the metal resulting in a release of the hazardous waste. [s. NR 660.10 (58), Wis. Adm. Code]

[Appendix V in ch. NR 665, Wis. Adm. Code](#), provides a list of potentially incompatible wastes. The list is not intended to be exhaustive, and the generator should perform adequate analysis to determine compatibility of wastes and containers.

Individual waste streams: An individual waste stream is a hazardous waste generated at a specific POG within a process. The waste stream could be physically or chemically different from other waste generated at different points in the process, or it could be the same type of waste, generated at different points along the same process or line.

At or near the Point of Generation (POG): Regulations require satellite accumulation must occur at or near the POG, but they do not specifically define “at” or “near” as specific minimum or maximum distances. As manufacturing and industrial processes are highly variable, the regulations allow flexibility in applying this requirement to allow for effective and safe management of hazardous waste. In general, POG means the point at which the waste is generated, prior to any dilution, mixing or other alterations; or at any time during the management of the waste where the waste properties may have changed due to exposure to the environment or other factors. [s. NR 662.034 (3), Wis. Adm. Code]

The SAA could be located within a room or storage cabinet provided that the room or storage cabinet is at or near the POG and under the control of the operator. Locating a SAA outside of the building in which the hazardous waste is generated may be regarded as placing it beyond the “at” or “near” the POG and would no longer be “under the control of the operator.” If a generator accumulates hazardous waste that is so dangerous it needs to be accumulated away from the POG, it should be accumulated under the more rigorous accumulation standards for CAAs.

Satellite Accumulation Requirements

Satellite accumulation requirements for SQGs, located in s. NR 662.192 (4), Wis. Adm. Code, are identical to the satellite accumulation requirements for LQGs, s. NR 662.034(3). Container requirements apply to Very Small Quantity Generators (VSQGs), but they are not called SAA or CAA.

Generators that accumulate hazardous waste on-site in containers are subject to the container management standards in subch. I of NR 665, Wis. Adm. Code. The table below identifies the sections of Subchapter I that must be followed, as well as other requirements that may be applicable.

Table 1 Summary of Satellite Accumulation Requirements

Container management standards	Required	Discussion
Container in good condition	Yes	If a container holding hazardous waste is not in good condition, or if it begins to leak, the owner or operator shall transfer the hazardous waste from this container to a container that is in good condition or manage the waste in some other way that complies with the requirements of subch. I of ch. NR 665.
Container compatible with wastes	Yes	The owner or operator shall use a container made of or lined with materials that will not react with, and are otherwise compatible with, the hazardous waste to be accumulated, so that the ability of the container to contain the waste is not impaired.
Container closed, except when adding/removing waste	Yes	A container holding hazardous waste shall always be closed during accumulation, except when it is necessary to add or remove waste.
Containers are properly labeled and marked	Yes	Mark the containers either with the words “Hazardous Waste” or with other words that identify the contents of the containers.
Containers marked with accumulation start date	No	Satellite areas are the only accumulation areas where hazardous waste containers are not required to have an accumulation start date.
Containers have an accumulation time limit	No	No time limit on containers that have not reached SAA accumulation limits.
Accumulation limits	Yes	A generator may accumulate as much as 55 gallons of non-acute hazardous waste or one quart of acute hazardous waste listed in s. NR 661.33(5).
Container marked with accumulation limit date	Yes	Once the accumulation limit has been reached in a SAA, the container(s) must be marked immediately with the date the limit was reached.
Moved within 3 days of accumulation limit	Yes ¹	Within 3 calendar days of the SAA reaching its accumulation limit, the container(s) must be moved to a CAA or be manifested and shipped to a designated hazardous waste facility. Note: There is no requirement that full containers of hazardous waste of less than 55 gallons be removed from an SAA.
Dating SAA container when moved to CAA	Yes	If the SAA container that reached the accumulation limit for the SAA is dated and immediately removed from the SAA into the CAA, that date is valid for the CAA start date. If the SAA is not moved immediately, the container must be re-dated when it is placed in the CAA ¹ .
Subchapter CC - air emission standards	No	Containers in SAAs are not required to comply with the air emission standards in subch. CC of ch. NR 665. LQGs—but not SQGs—are required to comply with the air emission standards for containers in CAA.

Treat waste in container	No ²	Treatment in SAA containers would require them to be essentially managed under full CAA requirements.
Inspections	No	Inspections of containers (whether weekly or some other frequency) in SAAs are not required, so long as the definition of SAA is met and the generator complies with the satellite accumulation regulations.

¹ The container must be dated with the date it is moved to the CAA. The container then must be moved off-site within 90, 180 or 270 days as required by ss. [NR 662.034\(1\)\(b\)](#) or [NR 662.192\(1\), \(2\) & \(3\)](#), respectively. This means that the clock for removing containers from the CAA area starts on the date the container was placed in the CAA. For example, an LQG could have up to 93 days to ship a container once the accumulation limit was reached at a SAA: 3 days at the SAA and 90 days at the CAA.

² Technically, a generator can treat hazardous waste in a satellite accumulation container. However, once a generator chooses to treat hazardous waste in a SAA container, the container must then comply with all container standards listed in subchapter I of ch. NR 665, which includes weekly inspections and compliance with subchapter CC air emissions requirements. Per s. NR 670.001(3)(b)11, a generator who treat hazardous waste in a container needs to comply with either ss. NR 662.034 (LQG) or NR 662.192 (SQG).

Best Management Practices

Though not required by Wisconsin’s rules, the following practices are strongly encouraged by the department to better protect employee health and the environment:

- Define and mark individual SAAs to better control the waste accumulation area, communicate potential hazards for employees and emergency responders, and assist in clarifying waste management, POG, individual waste streams, etc. during an inspection event.
- Label SAA containers with an indication of the hazards contained in them (e.g. applicable hazardous waste characteristic(s); Department of Transportation hazard communication requirements at 49 CFR part 172 subpart E (labeling) or subpart F (placarding); a hazard statement or pictogram consistent with the Occupational Safety and Health Administration Hazard Communication Standard at 29 CFR 1910.1200; or a chemical hazard label consistent with the National Fire Protection Association code 704). This will be required when Wisconsin adopts the EPA’s Generator Improvement Rules.
- Keep incompatible materials and/or waste containers separated by means of a dike, berm, wall, or other device that will segregate the incompatible wastes and/or materials.
- SAA locations can be included in the preparedness, prevention and emergency procedures, and contingency plan.
- Do not place hazardous waste in unwashed satellite accumulation containers, as they may have previously held an incompatible material.
- Ensure that operators who use satellite accumulation containers are trained on SAA requirements and emergency procedures. For details, see [Training Requirements and Records: Hazardous Waste Generators, TSDs, and Collection Facilities \(WA-099\)](#).
- Include SAAs in the CAA weekly inspection program.
- Include SAAs in the facility’s preparedness, prevention, and emergency procedures.
- Handle containers to avoid ruptures and leaks.
- Provide secondary containment in SAA areas.

Common Scenarios

SCENARIO: A facility runs several process lines that lead to a similar POG location. One process generates waste that is accumulated in SAA-1 and the adjacent process generates waste that is accumulated in SAA-2. Can the two SAAs be adjacent to each other?

The EPA developed the satellite accumulation rules to allow generators the flexibility of managing small volumes of hazardous waste and not for circumventing regulatory responsibility. An example of “circumventing regulatory responsibility” would be placing 55-gallon drums five feet apart along a wall of the facility, and outside of the immediate control of the operator, and calling each drum location an individual SAA area. This could allow for large accumulation of waste while avoiding the CAA requirements. The EPA and DNR would consider this scenario to be one SAA rather than a row of distinct SAAs.

Alternatively, distinct SAA areas that are receiving different wastes from a single process line, when delineated clearly and when easily justified by personnel, could be placed adjacent to each other.

It is important to note that the SAA is not the container, but rather an area defined to place container(s) receiving hazardous wastes. Once designated, the SAA can include multiple containers which, cumulatively, are subject to the volume limits previously outlined. Federal and state regulations do not require that the SAA be designated in any specific way. It is good operating practice, however, to make it clear to both the generator’s employees and to the inspecting agency that satellite accumulation is occurring. Common practices would include signage, marking the floor with paint or tape, and protective barriers.

In short, the generator should be able to explain to an inspector why the chosen SAA configuration meets the interests of safety, practicality, and convenience, without constituting circumvention of CAA requirements.

SCENARIO: If hazardous waste is taken from a small container (e.g., a beaker) to a large container (e.g., a 55-gallon drum), is the small container considered a satellite accumulation container?

In cases where there are multiple points of generation within the same SAA, movement or consolidation within the SAA is permissible as long as the waste remains “at or near” the POG and “under the control of the operator of the process generating the waste.” For example: Certain facility operations, such as manual circuit board cleaning, hazardous waste generated in a laboratory, or certain types of soldering operations may sometimes entail generating very small quantities of the same type of hazardous waste at individual work stations.

These small containers are sometimes referred to as “day cans,” but this term is not defined in federal or state regulations.

Such small accumulations of hazardous waste may be periodically collected by someone other than the immediate workstation personnel, aggregated in a container which is operated as a SAA in the same room or work area, and then eventually removed to a CAA. In such instances, either the workstation personnel or the person collecting the waste from the individual workstations may be regarded as the operator of the process, since one or the other typically will be aware of the activity during operating hours. The aggregation of the waste in a total volume of 55 gallons or less may be regarded as

The EPA document RO [14703](#), *Frequently Asked Questions about Satellite Accumulation Areas*, contains more information.

legitimate satellite accumulation so long as it is done at or near the POG and in such a way that the intent of the satellite accumulation allowance is satisfied as discussed above

SCENARIO: A facility has a larger container, such as a cubic yard box, tote, sludge bin or roll-off box, for collecting a process waste. Is this a SAA or a CAA container?

To meet SAA requirements, the container cannot accumulate more than 55 gallons of non-acute hazardous waste or 1 quart of acute hazardous waste. If you intend to fill the larger container past this accumulation limit, the container will be considered in violation of SAA accumulation requirements. It is recommended that these containers be managed as CAA containers which require them to be labeled as hazardous waste, dated with the start date of when that waste was first placed in the container, and kept closed when waste is not being actively added to or removed from the container.

DNR Contact Information

For more information on this subject, including other publications, staff contacts, administrative codes and statutes, search by topic or WA publication number at dnr.wi.gov. Staff contacts can be found by searching "[hazardous waste requirements](#)" in the staff directory on the Contact tab.

Mailing address: DNR Waste & Materials Management Program, PO Box 7921 Madison, WI 53707

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Pursuant to ch. 227, Wis. Stats., the Wisconsin Department of Natural Resources has finalized and hereby certifies the following guidance document.

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Satellite Accumulation Requirements for Hazardous Waste Management

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DNR CERTIFICATION

I have reviewed this guidance document or proposed guidance document and I certify that it complies with sections 227.10 and 227.11 of the Wisconsin Statutes. I further certify that the guidance document or proposed guidance document contains no standard, requirement, or threshold that is not explicitly required or explicitly permitted by a statute or a rule that has been lawfully promulgated. I further certify that the guidance document or proposed guidance document contains no standard, requirement, or threshold that is more restrictive than a standard, requirement, or threshold contained in the Wisconsin Statutes.

A handwritten signature in black ink, appearing to read 'Joseph P. Van Rossum', is written over a horizontal line.

October 4, 2019

Signature

Date