Closed Container Guidance for Hazardous Waste Generators

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Introduction

The hazardous waste rules for the management of containers are intended to help protect ignitable or reactive wastes from sources of ignition; prevent spills, emissions and releases of volatile wastes; reduce the potential of mixing incompatible wastes; and reduce the potential of direct contact with hazardous wastes.

> *"A container holding hazardous waste shall always be closed during storage, except when it is necessary to add or remove waste."*
> NR 665.0173(1)

A container is any portable device in which a material is stored, transported, treated, disposed of or otherwise handled. The most commonly used container is a 55-gallon drum. Other examples of containers include bags, boxes and totes. The Department of Natural Resources considers containers closed when they are sealed to the extent necessary to keep the hazardous waste and associated air emissions inside the container

This guidance document is intended to outline closed container requirements and offer examples of what the DNR considers acceptable practices in meeting these requirements. These rules and best management practices apply to containers in central accumulation areas (CAA)[1] and satellite accumulation areas (SAA). All generators must meet the ch. NR 665.0173(1) Wis. Adm. Code, requirement as referenced in NR 662.034(3)(a)1, NR 662.192(4)(a)1 and NR 662.220(5)(c)1.

Liquid vs. Non-Liquid Waste

Management requirements are different for liquid vs. non-liquid hazardous wastes. In order to verify that your waste is non-liquid (solid or semi-solid) generators commonly use the Paint Filter Test Method which can determine the presence of free liquids.

Collect a representative sample and place the hazardous waste material in a conical paint filter for 5 minutes. If liquid passes through the filter in that time frame, the sample contains free liquid and must be handled as a liquid hazardous waste.

> Document that there are no free liquids in the waste using Test Method 9095B, U.S. Environmental Protection Agency publication SW–846 or a comparable method.

Liquid Waste Containers

A container accumulating liquid hazardous wastes in either a CAA or SAA must be kept closed both to prevent the escape of vapors and to prevent spills if the container is tipped or knocked over. The DNR generally considers containers that accumulate free liquids or liquid hazardous wastes to be closed when all openings or lids are secure, closed and latched, except when wastes are being added to or removed from the container.

> **Accumulation of liquids in open top drums without lids is not allowed** even if the liquid has high viscosity or it contains solids which would settle to the bottom.

[1] CAA refers to the area on-site where hazardous waste accumulation occurs in containers and tanks. These areas are not subject to an operating license requirement as long as the requirements in NR 662.192 (for small quantity generators) or NR 662.034 (for large quantity generators) are met. This includes CAAs with 90-day, 180-day or 270-day accumulation time limits.

Closed-top containers: When using closed-top drums or containers to accumulate liquids, the drum is considered closed when the lid and bungs are secured. Closed-top drums typically have two bungholes with a non-removable lid.

> ⚠ A container holding hazardous waste may not be opened, handled or stored in a manner that may rupture the container or cause it to leak.

Pressure-vacuum relief valves, also called a "conservation vents," are designed to prevent emissions when in the closed position. These devices are used to maintain the internal pressure of the container in order to avoid unsafe conditions and/or damage to containers.

Funnel lids for closed-top drums: There are a number of commercial devices available that aid in the frequent addition of hazardous waste to containers. These devices – when used correctly – satisfy the closed container requirement. For example, special funnels with manual or spring closed lids, one-way valves that contain the waste or emission, or other similar closing devices, could be used for closed-top drums during daily operations when adding or removing liquid hazardous wastes from these drums.

The closed container requirement is satisfied when the funnel is screwed tightly into the bunghole and the funnel's lid is firmly closed and latched. If the funnel lid is fitted with a locking mechanism that keeps the lid in a closed position, it should be used at the end of the work shift or day to meet the closed container requirements. All other openings on the drum lid should be properly closed or capped.

Open-top containers: On a typical open-top container, the entire lid is removable and the lid is secured with clamps, a ring and bolt, or a clamp and hinge. When using open-top containers to accumulate liquid wastes, the container would be considered closed when the band that seals the lid to the containers is clamped or tightly bolted.

When a drum is in a SAA, the lid of an open-top drum may be placed on top without the ring in place as long as there is complete contact with the rim all the way around the top **and** the container is secured with a chain or strap to a wall, building support column or stationary equipment in the area. The lid must be secured with the ring and bolt at the end of the work shift when waste is no longer being generated. If the lid is a flip top, then the lid needs to be equipped with a latch and secured at the end of the work shift.

Valve vents and level indicators used to prevent the overfilling of a container may be used on containers **if the containers are closed after the addition of liquids.**

> Air Emissions: Refer to subch. CC of ch. NR 665 for specific requirements to control air emissions from CAA containers holding hazardous wastes with a volatile organic concentration equal to or greater than 500 ppm and that have a design capacity greater than or equal to 26 gallons.

Non-Liquid Waste Containers

Containers that are used to accumulate non-liquid hazardous waste (solid and semi-solid hazardous wastes that pass the paint filter test) in CAAs and SAAs must also be kept closed. Examples include dewatered metal-bearing sludges, sandblasting waste, paint filters and discarded pharmaceuticals. For non-liquid hazardous waste, the DNR considers the container closed as long as there is complete contact between the lid and the rim all around the top of the container, except when waste is being added to or removed from the container.

Bags, boxes, pails and totes: Hazardous waste may be stored in other types of containers such as bags, boxes, pails and totes. For example, waste paint filters are sometimes stored in bags. These bags are considered to be closed when the neck of the bag is tightly twisted and bound to prevent the release of the volatile compounds and emissions.

> ⚠ For non-liquid wastes that have the potential to release vapors, follow the above guidance for containers storing liquids.

Because it is more likely that small containers such as 5-gallon pails could tip over, cover these containers tightly at all times except when waste is being added or removed. It is recommended that these containers be placed in a tub or spill containment unit.

Covers with foot pedals: Containers with covers opened by a foot pedal, such as flip-top, spring loaded or self-closing lid may be used for non-liquid hazardous wastes.

These containers are considered to be closed when the covers make complete contact between the lid and the entire rim. Containers of this type are appropriate for wastes such as rags, batteries, aerosol cans or solvent-contaminated wipes.

Roll-off boxes are primarily used for storage and transportation of non-liquid wastes. If the roll-off box has a manufactured lid that opens and closes, the container is considered closed when there is complete contact between the lid and the entire rim. When storing waste that contains volatile organic vapors, the lid of the roll-off box must create a complete seal to prevent vapor release.

If the waste is a non-volatile, non-liquid waste (e.g., certain dewatered sludge) the roll-off box is considered closed when the tarp is secured so the cover stays squarely on the roll-off box at all times. Once the roll-off box is full, tightly secure the tarp by tying or strapping it firmly to the roll-off box.

> If tarps are used for outdoor accumulation or storage of hazardous waste, they must be made of materials suitable to weather conditions, including exposure to wind, moisture and sunlight. Precipitation cannot be allowed to enter the container, as even modest amounts are sufficient to leach hazardous constituents from the waste and potentially leak, creating a violation. Use of a tarp would not be an acceptable Level 2 control device for volatile wastes.

Container images courtesy of Justrite®

Continuous or Intermittent Use

Containers continuously or intermittently receiving hazardous wastes often remain open while connected to a device (e.g., under a baghouse or filter press) that generates waste. In these situations, the containers must be capable of catching and retaining all of the material during transfer from the device to the container, to avoid spills or releases. These containers must be kept closed when not continuously or intermittently receiving hazardous waste (i.e., end-of-shift or end-of-day).

Example 1: Cubic yard boxes such as gaylords with bag liners may be used for non-volatile hazardous waste, such as F006 filter cake. **Between batch filling**, these containers are considered closed when the neck of the inner bag is twisted shut or a lid is securely placed on the box **between batch filling**. Securely tie off the cubic yard bag when the bag is full. When VOCs are involved, an airtight closure is required.

Example 2: Laboratory jars or carboys that receive waste with volatile organic compounds directly from a machine, like a high performance liquid chromatography (HLPC) analyzer, are considered to be closed when the tubing and cap are secured (an airtight seal) to the container. A pressure-vacuum relief valve may be used.

Example 3: A super sac connected to a baghouse is considered closed when it is securely connected to the baghouse so that **no waste** escapes from the super sac.

DNR Contact Information

For more information on this subject, including other publications, staff contacts and administrative codes and statutes, search "waste determination" at **dnr.wi.gov**, or contact Waste & Materials Management staff.

Mailing address: DNR Waste & Materials Management Program, PO Box 7921 Madison, WI 53707
Email: DNRWasteMaterials@Wisconsin.gov

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NOTICE OF FINAL GUIDANCE & CERTIFICATION

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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Closed Container Guidance for Hazardous Waste Generators

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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.

October 8, 2019

Signature | Date