Kansas Department of Health and Environment
Bureau of Waste Management
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Container Management for Hazardous Waste Generators

Technical Guidance Document HW-2005-G1

Among the most common violations cited during inspections are hazardous waste containers that are not correctly closed, labeled, or dated. This guidance document describes the regulatory requirements for managing hazardous waste storage containers and satellite accumulation containers. This document also provides recommendations not specifically required by the regulations. The recommendations are for guidance only and are not intended to replace other regulatory or safety requirements.

Introduction

Unless specifically stated otherwise, the information in this document applies to both storage containers and satellite accumulation containers.

- "Storage container" refers to a portable device that holds hazardous waste for a temporary period.
- "Satellite accumulation container" refers to a hazardous waste container that is located at or near the point where the waste initially accumulates and that meets the requirements of 40 CFR 262.34(c), as adopted by reference in KAR 28-31-262.

Labeling Containers

Each container must be labeled or marked with the words "Hazardous Waste." The label must be legible and in good condition. If it is torn or becomes difficult to read, replace it right away.

Each storage container must also be labeled or marked with the accumulation start date. This is the date that waste was first added to the storage container OR the date that a satellite accumulation container became full and no longer met the definition of a satellite accumulation container.

Condition of Containers

Each container must:

- Be in good condition (i.e., no deep creases or dents and no severe rust or corrosion); and
- Have adequate strength and integrity to contain the waste.

Please be aware that each container must meet U.S. Department of Transportation (DOT) packaging standards when shipped off-site. Please contact the Federal Motor Carrier Safety Administration at 785-271-1260 for any questions regarding DOT regulations.

Compatible Containers

Each container must be compatible with the hazardous waste to be placed in the container to ensure that the ability of the container to contain the hazardous waste is not impaired. Therefore, the container must be made of or lined with materials that will not react with, and are otherwise compatible with, the hazardous waste to be stored. For example, an acid waste must not be stored in a metal container without an appropriate liner because the acid may corrode the metal, resulting in a release of the hazardous waste.

Each storage container that contains hazardous waste that is incompatible with any other waste or material stored nearby must be separated by a dike, berm, wall, curb, or other device that will segregate the incompatible wastes and/or materials. Although this safety precaution is not required for satellite accumulation containers, it is strongly recommended.

Closed Containers

To minimize the potential for spills, releases, and volatile air emissions, each container must be closed, except when actively adding or removing waste. Containers must be closed in a way that:

- Prevents the escape of vapors; and
- Prevents the release of the contents in the event a container is tipped or knocked over.

To be considered closed, each container must be managed as follows.

Open-head drum (e.g., a container that has a removable lid). The lid has a good gasket, the lid is fully seated on the drum's rim and the clamping ring is fully secured, so that if the container is tipped and waste contacts the lid, no leaks occur.

Closed-head drum (e.g., a container with a non-removable lid and, typically, two bung holes). The bung gaskets are in good condition and the bungs are fully secured, so that if the container is tipped and waste contacts the bungs, no leaks occur.

A funnel with a lid could be used with a closed-head drum. The funnel must be securely screwed into a bunghole. The other bunghole must be closed. The lid of the funnel may need to be fitted with a gasket to firmly seal the funnel lid. The funnel lid needs to be kept closed, unless waste is being actively added or removed. The lid may be closed either by a latching mechanism or spring-loaded device, or the drum may be anchored in a way that will prevent tipping (for example secured to the wall or a pole).

Another type of funnel that may be used is one that has a one-way valve that allows liquid hazardous waste to enter the container, but prevents the waste and air emissions from escaping. Level indicators can be used on closed-top containers to prevent overfilling.

Bag. The opening is securely closed so that no waste is visible.

Box. The lid or flaps are securely closed with no gaps, holes, tears, or openings in the box.

Roll-off box, dumpster, tote, Gaylord container, and similar containers. The lids, covers, hatches, and tailgates must be securely closed and fastened to the container. There must be no holes, tears, or gaps in the covers or lids. The covers or lids must cover the entire opening with no visible gaps along the edges.

Solid and semi-solid hazardous waste in satellite accumulation containers

For solid and semi-solid hazardous wastes that emit vapors, the closed container criteria listed in the preceding paragraphs must be followed.

For solid and semi-solid hazardous wastes that do not emit any vapors, an open-head container is considered closed as long as a lid is on the container. The lid does not have to be secured to the container, but must make complete contact with the top/rim of the container, all the way around the top. At the end of the work shift, the lid must be securely closed (e.g., ringed and bolted, or snap rings put in place).

Satellite accumulation containers attached to processors or instruments that continuously generate hazardous waste. These containers are commonly found in laboratories or research facilities where gas chromatography (GC) or high-pressure liquid chromatography (HPLC) equipment is used. Such containers must be closed to minimize air emissions when the equipment is not in operation. This may be achieved through the use of a gasket to seal any opening between the top of the container and the hose that drains liquid hazardous waste from the equipment into the container. Secondary containment is recommended to contain a release in the event the container is overfilled or overturned. The container may be secured to reduce the chance the container is overturned. If a spill does occur, it must be cleaned up immediately and the waste properly disposed of.

Other considerations for closed containers

- Gaskets must be installed where necessary for proper closure.
- If a container is located outside and precipitation is able to accumulate on the cover or lid, the cover or lid must be impervious to water and able to support the weight of any accumulated precipitation.

- To prevent the possible build-up of pressure in containers that hold liquid hazardous wastes, a pressure release valve should be considered. The vent must remain closed when not venting.
- It is recommended that any container storing ignitable waste be grounded when adding or removing waste.

Location of Containers

Aisle Space

Small Quantity Generators (SQGs) and Large Quantity Generators (LQGs) are required by 40 CFR 265.35 to "maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, *unless* aisle space is not needed for any of these purposes."

Ignitable and Reactive Wastes

For LQGs, each container storing ignitable or reactive hazardous waste must be stored at least 50 feet from the facility's property line.

Air Emission Standards

LQGs should be aware that organic air emission standards may apply to their storage containers (and any tanks or surface impoundments). These regulations are located in 40 CFR Parts 264/265, Subparts AA, BB, and CC. KDHE encourages each LQG to review their waste management practices to ensure compliance with these regulations and to obtain professional consulting services, if necessary.

Inspections

Inspecting the areas where hazardous waste containers are stored helps the generator identify containers that might be leaking, or are otherwise in poor condition, before hazardous waste is released to the environment. Keeping a written record of the inspection information provides documentation that required inspections were performed and, if problems are discovered, that corrective action was taken.

Conducting Inspections

Each Conditionally Exempt Small Quantity Generator (CESQG) that has 25 kg (55 lb) or more of hazardous waste in storage and all Kansas Small Quantity Generators (KSQGs) are required to conduct monthly inspections of each area where hazardous waste storage containers are located.

SQGs and LQGs are required to conduct weekly inspections of each area where hazardous waste storage containers are located.

Inspections are not required for satellite accumulation containers.

All inspections, regardless of frequency, must include, but should not be limited to, a check for any container deterioration and leaks. It is recommended that inspections also include a check for the following:

- Each container is labeled or marked.
- Labels or markings are easily viewed.
- Dates on each container are correct.
- Containers are properly closed.
- Incompatible wastes and other materials are properly segregated.
- Secondary containment, if provided, is in good condition.
- For SQGs and LQGs, aisle space throughout the facility meets the requirements of 40 CFR 265.35.
- For LQGs, ignitable or reactive waste is at least 50 feet from the property line.

Documenting Inspections

Each inspection, whether weekly or monthly, must be recorded and the record kept for at least three years from the date of the inspection. At a minimum, the following information must be recorded:

- Date of inspection;
- Time of the inspection;
- The name (not just initials) of the inspector;
- Observations (e.g., leaks, rusting); and
- The date and nature of any repairs or other remedial actions.

Satellite Accumulation Containers

LQGs, SQGs, and KSQGs may use satellite accumulation containers. Satellite accumulation containers may not be used by CESQGs. In addition to the container requirements discussed in the preceding sections, the following are additional regulations that apply specifically to satellite accumulation containers:

Capacity, Number, and Location

- A satellite accumulation container must not accumulate more than 55 gallons of hazardous waste, even if the container's capacity is greater than 55 gallons.
- There must be no more than one satellite accumulation container for each type of hazardous waste at each point of generation. [Kansas regulations are different than the Federal regulations.]
- Each satellite accumulation container must be at or near the point of generation and under the control of the operator.
- Each satellite accumulation container must be marked with the words "Hazardous Waste". [Kansas regulations are different than the Federal regulations.]

Transition from a Satellite Accumulation Container to a Storage Container

A satellite accumulation container is not required to be dated until it no longer meets the definition of a satellite accumulation container, at which time it becomes a storage container. A container ceases to be a satellite accumulation container if one or more of the following occur:

- The container, if it has a 55-gallon capacity or less, becomes full.
- The container, if it has a capacity greater than 55 gallons, accumulates more than 55 gallons of hazardous waste.
- The container is no longer at or near the point of generation.
- The container is no longer under the control of the operator.
- A second container of the same waste is started at the same point of generation.

The date that a satellite accumulation container becomes a storage container must be recorded on the container as the accumulation start date. A facility then has 3 days in which to either:

- Move the container to a hazardous waste storage area;
- Transfer the contents into another storage container, tank, or recycling unit; or
- Begin to manage the container as a storage container at the location where it was generated (including inspections).

Using Satellite Accumulation Containers That Hold More Than 55 Gallons

As previously stated, the amount of hazardous waste collected in each satellite accumulation container is limited to 55 gallons per waste stream, although the capacity of the container is not limited and may be greater than 55 gallons. For example, an 85-gallon container could be used, as long as no more than 55 gallons of waste is placed in it. Once the 55-gallon capacity is exceeded, the container must either be emptied, or dated and managed as a storage container. To avoid possible mismanagement of hazardous waste, KDHE recommends against using any container with a capacity of more than 55 gallons as a satellite accumulation container.

Training Recommendation

Although not required, KDHE recommends that persons using satellite accumulation containers be trained to:

- Label each container with the words "Hazardous Waste";
- Keep each container properly closed;
- Keep each container in good condition; and
- Use a container that is compatible with the waste.

Day Accumulation Containers

A "day accumulation container" is any container with a capacity of no more than 6 gallons that is used to accumulate hazardous waste at a work area or work station, and that is under the direct control of the operator of the work area or station.

KDHE allows the use of day accumulation containers only under the following conditions:

- Each container must be labeled or marked with the words "Hazardous Waste."
- Each container must be kept securely closed when waste is not being actively added or removed (refer to the preceding section on "Closed Containers").
- Each container must be in good condition and compatible with the waste placed in the container.
- Each container must be emptied into an appropriate satellite accumulation container, storage container, or tank at the end of each work day, or each shift for continuous operations, regardless of whether the container is full or not.

Day accumulation containers that have more than a 6-gallon capacity or are not managed in accordance with the above guidelines are considered satellite accumulation containers.

RCRA Empty Containers

"RCRA empty" is a phrase that is used to refer to a container whose contents (residues) are so minimal that they are no longer subject to RCRA. As a result, the container, with the residue, may be disposed of as a solid waste. "RCRA empty" criteria depend on the type of waste that was held in the container.

For containers that held hazardous wastes (except acute hazardous wastes or compressed gas), a container or inner liner is considered empty if all wastes have been removed that can be removed using methods commonly used for that type of container (e.g., pouring, pumping, and aspirating), and:

- No more than 1 inch of residue remains on the bottom of the container or inner liner; or
- No more than 3% by weight of the total capacity of the container remains in the container or inner liner if the container is less than or equal to 119 gallons in size; or
- No more than 0.3% by weight of the total capacity of the container remains in the container or inner liner if the container is greater than 119 gallons in size.

For containers that held an acute hazardous waste, a container or inner liner is considered empty if:

- The container or inner liner has been triple rinsed using a solvent capable of removing the acute hazardous waste; or
- The container or inner liner has been cleaned by another method that has been shown in the scientific literature, or by tests conducted by the generator, to achieve equivalent removal; or
- In the case of a container, the inner liner that prevented contact of the acute hazardous waste has been removed from the container.

For containers that held a hazardous waste that was a compressed gas, a container is considered empty when the pressure in the container approaches atmospheric pressure.

For additional information regarding the proper management of solid or hazardous waste in Kansas, you may contact the Bureau of Waste Management at (785) 296-1600, or the address at the beginning of this document, or visit the Bureau's website at www.kdheks.gov/waste.